

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

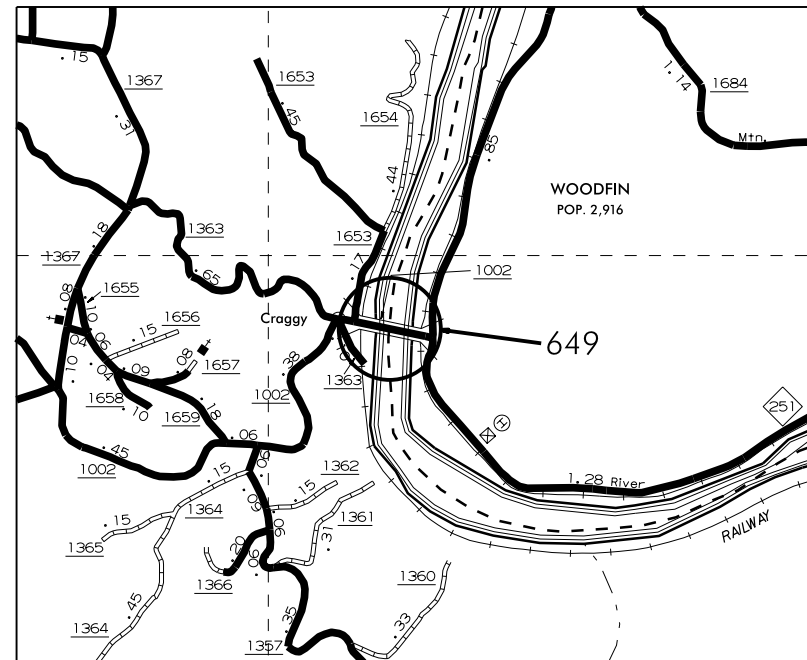
BUNCOMBE COUNTY



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15B.22.22	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15B.22.22	-	P.E.	
15B.22.22	-	CONST.	

LOCATION: **BUNCOMBE COUNTY:**
BRIDGE #649 ON SR 1002 OVER FRENCH BROAD RIVER AND SOUTHERN RAILROAD.

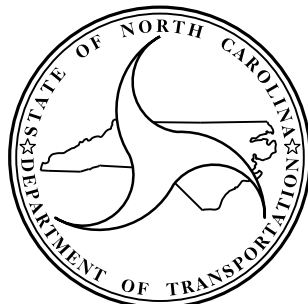
TYPE OF WORK: **BRIDGE PRESERVATION - CONCRETE DECK WEARING SURFACE OVERLAY.**



VICINITY MAP - BUNCOMBE CO.

PROJECT: 15B.22.22

CONTRACT: DM00142



DESIGN DATA

BUNCOMBE COUNTY
#649 ADT 2012 = 7,200

PROJECT LENGTH

BUNCOMBE COUNTY
#649 = 0.146 MILE

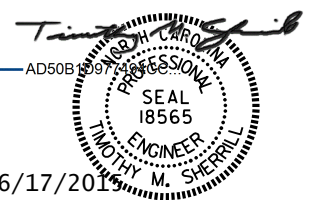
Prepared in the Office of:
**DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

TIMOTHY M. SHERRILL, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
JULY 15, 2015

DocuSigned by:



6/17/2015

TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BUNCOMBE COUNTY



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15B.22.22	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15B.22.22	-	P.E.	
15B.22.22	-	CONST.	

LOCATION: **BUNCOMBE COUNTY:**
**BRIDGE #649 ON SR 1002 OVER FRENCH BROAD RIVER
AND SOUTHERN RAILROAD.**

TYPE OF WORK: **BRIDGE PRESERVATION - CONCRETE DECK WEARING SURFACE OVERLAY.**

INDEX OF SHEETS

- | | |
|-------------------------|---------------------------------|
| <i>1</i> | <i>TITLE SHEET</i> |
| <i>1A</i> | <i>INDEX OF SHEETS</i> |
| <i>S-1</i> | <i>TOTAL BILL OF MATERIAL</i> |
| <i>S-2 THRU S-18</i> | <i>STRUCTURAL PLANS</i> |
| <i>SN</i> | <i>STANDARD NOTES</i> |
| <i>TMP-1 THRU TMP-3</i> | <i>TRAFFIC MANAGEMENT PLANS</i> |

PROJECT: 15B.22.22

CONTRACT: DM00142

TOTAL BILL OF MATERIAL										
INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE S9.5B	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	CLASS III SURFACE PREPARATION	VOLUMETRIC MIXER	SYNTHETIC RUBBER EXPANSION JOINT SEAL	CONCRETE FOR DECK REPAIR	SCARIFYING BRIDGE DECK	CONCRETE WEARING SURFACE
SO. YDS.	TONS	TONS	SO. FT.	SO. YDS.	SO. YDS.	LS	LS	CU. FT.	SO. YDS.	SO. FT.
189	19	1	17,896	80	12	LS	LS	240	2,246	20,208

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
BRIDGE NO. 649

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494CC...

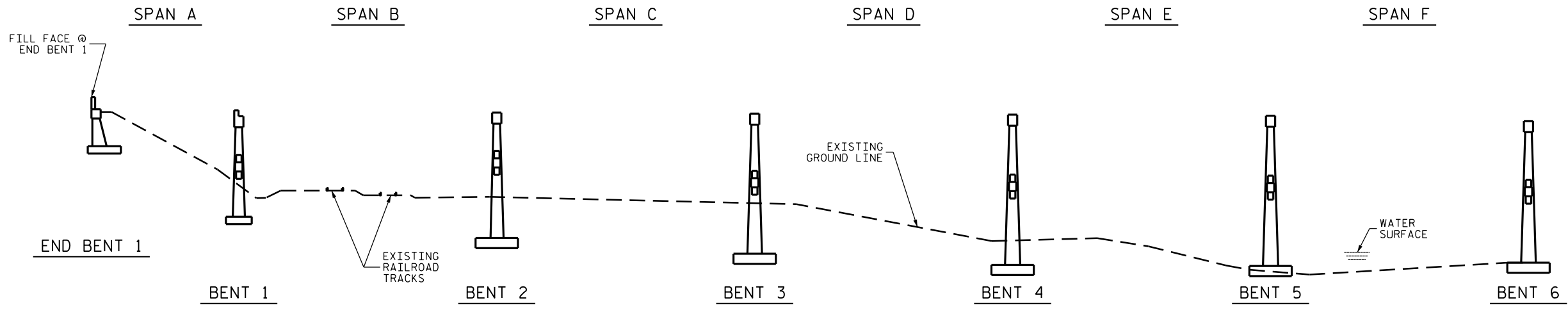
6/17/2015



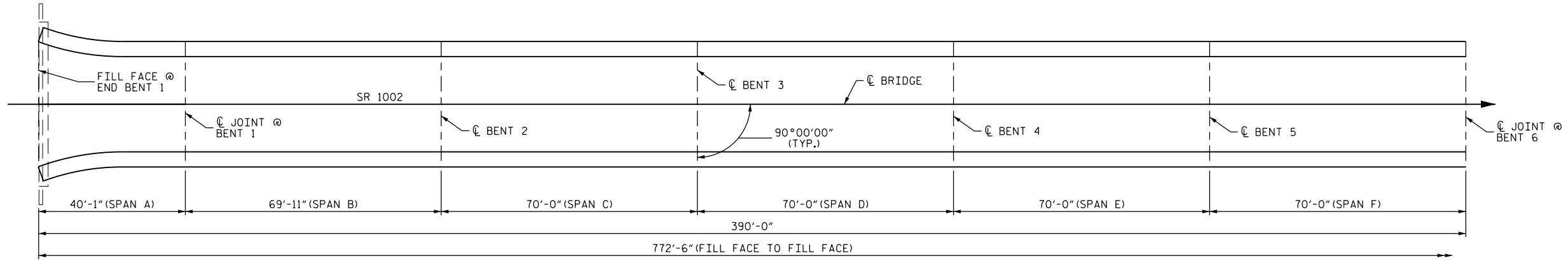
STATE OF NORTH CAROLINA					
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
TOTAL BILL OF MATERIAL					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					S-1
					18

DRAWN BY : R.PUTEK DATE : 05/15
CHECKED BY : T.SHERILL DATE : 05/15

NOTE:
 THE PROFILE INFORMATION AND WATER SURFACE LEVEL ARE TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED NOV. 17, 2014



SECTION ALONG C-C



PLAN

SCOPE OF WORK

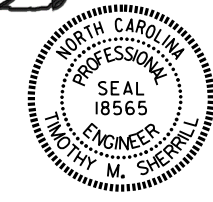
- REMOVE ASPHALT WEARING SURFACE, USING SCARIFICATION METHODS
- PARTIALLY REMOVE BRIDGE DECK CONCRETE, USING SCARIFICATION METHODS.
- PARTIALLY DEMOLISH BRIDGE DECK JOINTS.
- OVERLAY PREPARED BRIDGE DECK WITH REINFORCED CLASS AA HIGH EARLY STRENGTH CONCRETE.
- INSTALL NEW SYNTHETIC RUBBER EXPANSION JOINT SEALS AT BENTS 1, 6, AND 11.
- GROOVE BRIDGE DECK.
- MILL AND PAVE ASPHALT APPROACHES.

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

SHEET 1 OF 3

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...

6/17/2015

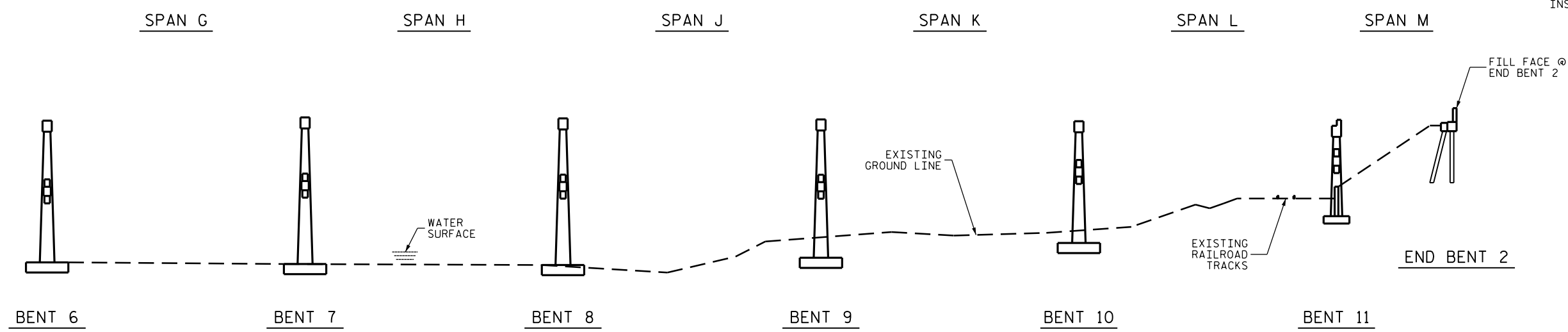


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE 649 ON
 SR 1002 OVER
 FRENCH BROAD RIVER

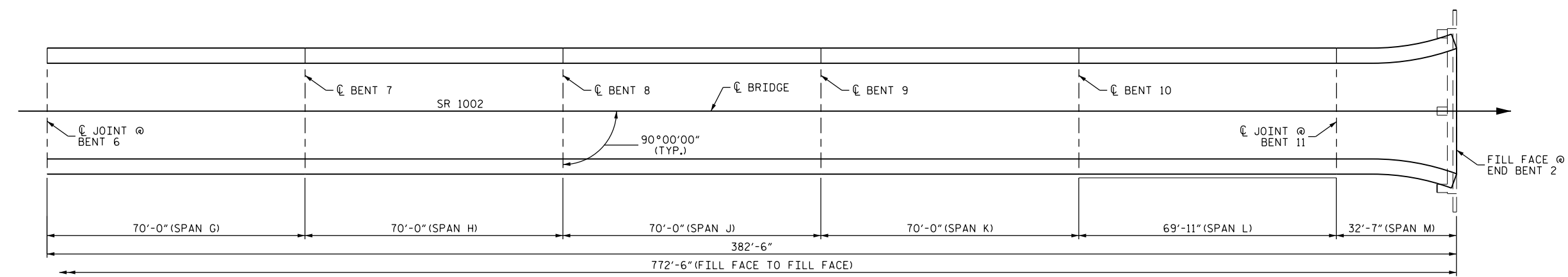
DRAWN BY :	R.PUTEK	DATE :	05/15
CHECKED BY :	T.SHERRILL	DATE :	05/15

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2	
1			3			TOTAL SHEETS	18
2			4				

NOTE:
 THE PROFILE INFORMATION AND WATER SURFACE LEVEL ARE TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED NOV. 17, 2014



SECTION ALONG CL



PLAN

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE 649 ON
 SR 1002 OVER
 FRENCH BROAD RIVER

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3	
1			3			TOTAL SHEETS	
2			4			18	

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...



6/17/2015

DRAWN BY : R.PUTEK DATE : 05/15
 CHECKED BY : T.SHERRILL DATE : 05/15

16-JUN-2015 15:11
 S:\PRG\POC\Squad C\Repair Projects\Buncombe 649\BUN_649_SD.GD.dgn
 malee7



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION, ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONCRETE WEARING SURFACE, SEE SPECIAL PROVISIONS.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. THE CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

FOR SCARIFYING BRIDGE DECK, AND CLASS II AND CLASS III SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR SYNTHETIC RUBBER EXPANSION JOINT SEAL, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

PROJECT NO. 15B.22.22

BUNCOMBE COUNTY

BRIDGE NO. 649

SHEET 3 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING FOR BRIDGE ON SR 1002 OVER FRENCH BROAD RIVER					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					18

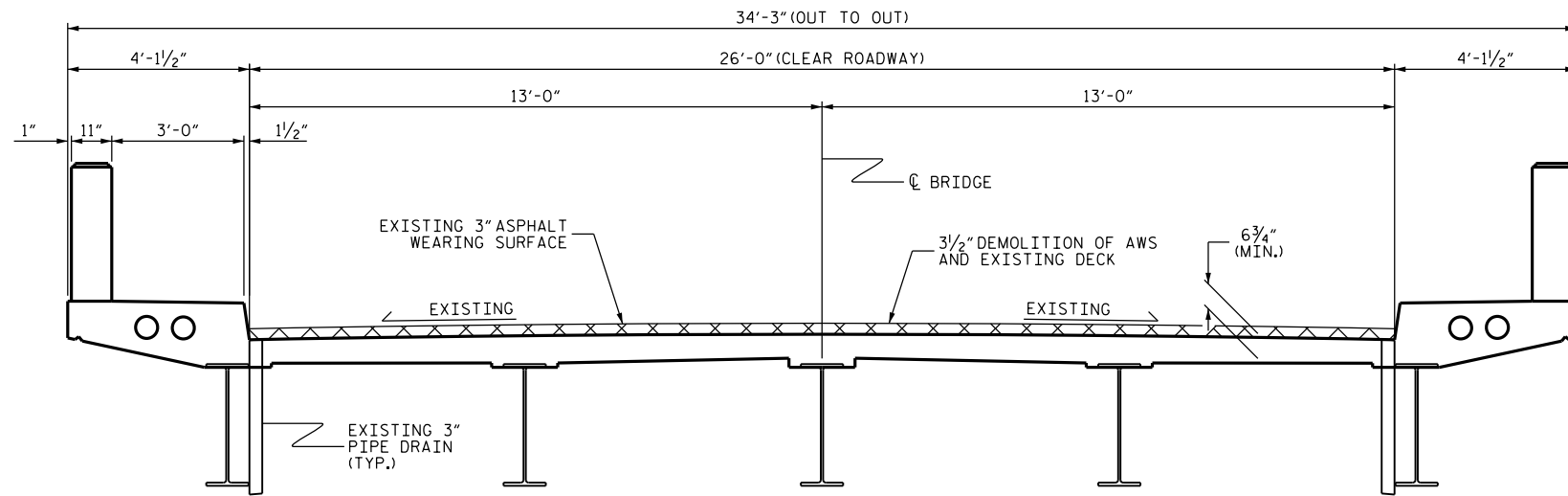
DocuSigned by:

Timothy M. Sherill
AD50B1D977494CC...

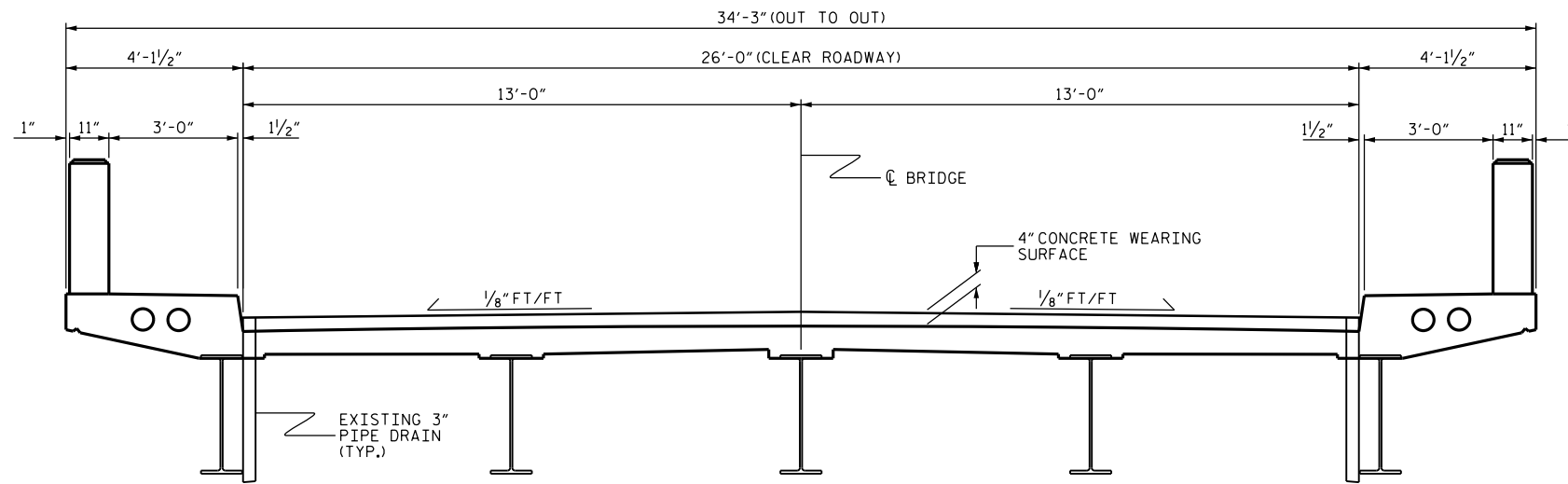


6/17/2015

DRAWN BY : R. PUTEK DATE : 05/15
CHECKED BY : T. SHERILL DATE : 05/15



TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-5
TOTAL SHEETS					18

DocuSigned by:

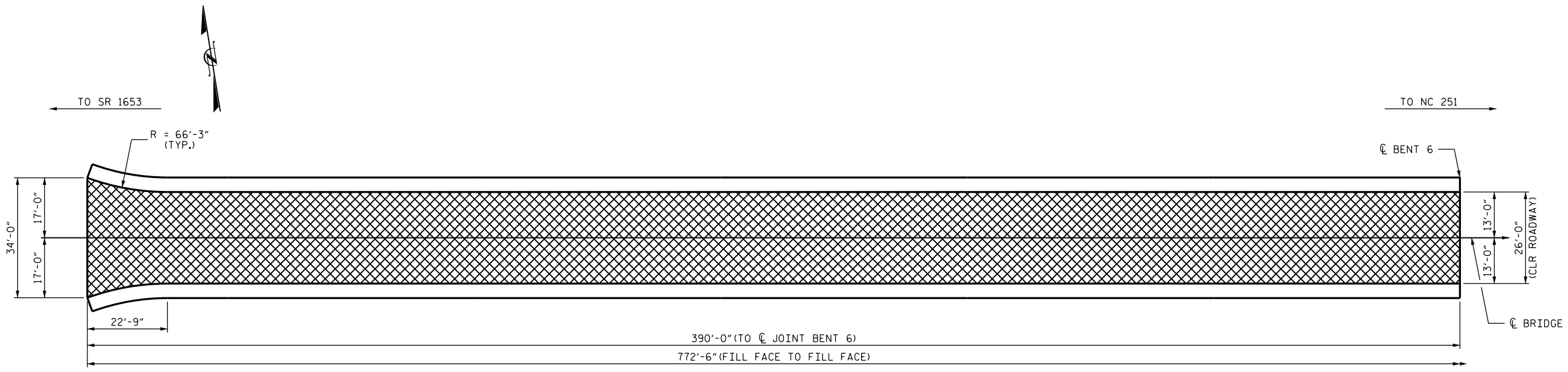
Timothy M. Sherill

AD50B1D977494CC...



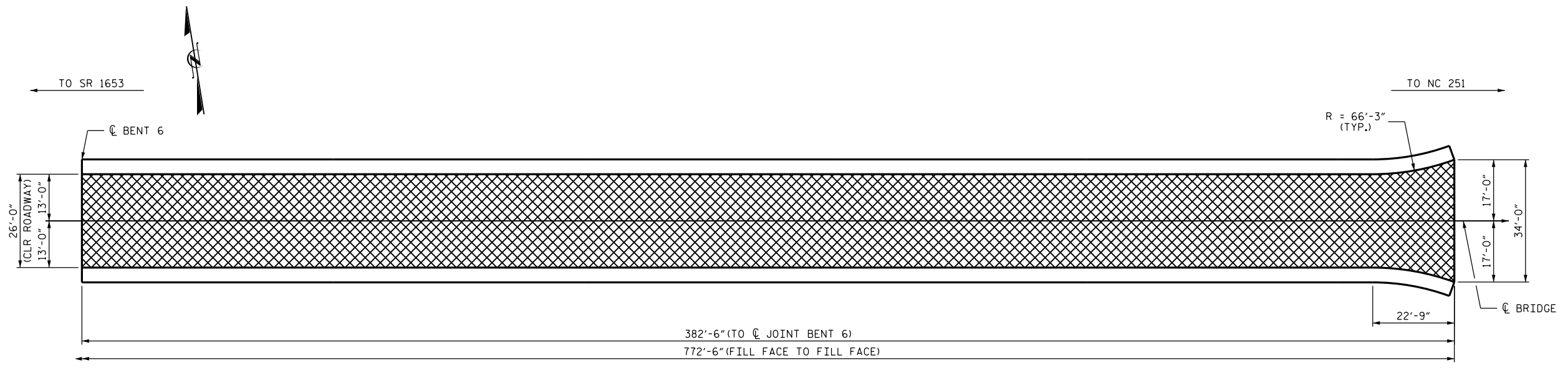
6/17/2015

DRAWN BY : R. PUTEK DATE : 05/15
 CHECKED BY : T. SHERRILL DATE : 05/15



DECK SCARIFICATION

PLAN
(SPANS A THRU F)



PLAN
(SPANS G THRU M)

REMOVE AWS AND PARTIALLY REMOVE DECK CONCRETE USING SCARIFICATION METHODS, BUT DO NOT DAMAGE EMBEDDED PLATES OF EXISTING DECK JOINTS AT BENTS 1, 6, AND 11. AS NECESSARY, USE HAND TOOLS AND OTHER METHODS TO REMOVE AWS AND CONCRETE AT THESE LOCATIONS.

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...



6/17/2015

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.	
OVERALL SURFACE PREPARATION PLAN						S-6	
REVISIONS						TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	18	
1			3				
2			4				

DRAWN BY : R.PUTEK DATE : 04/15
 CHECKED BY : T.SHERRILL DATE : 05/15

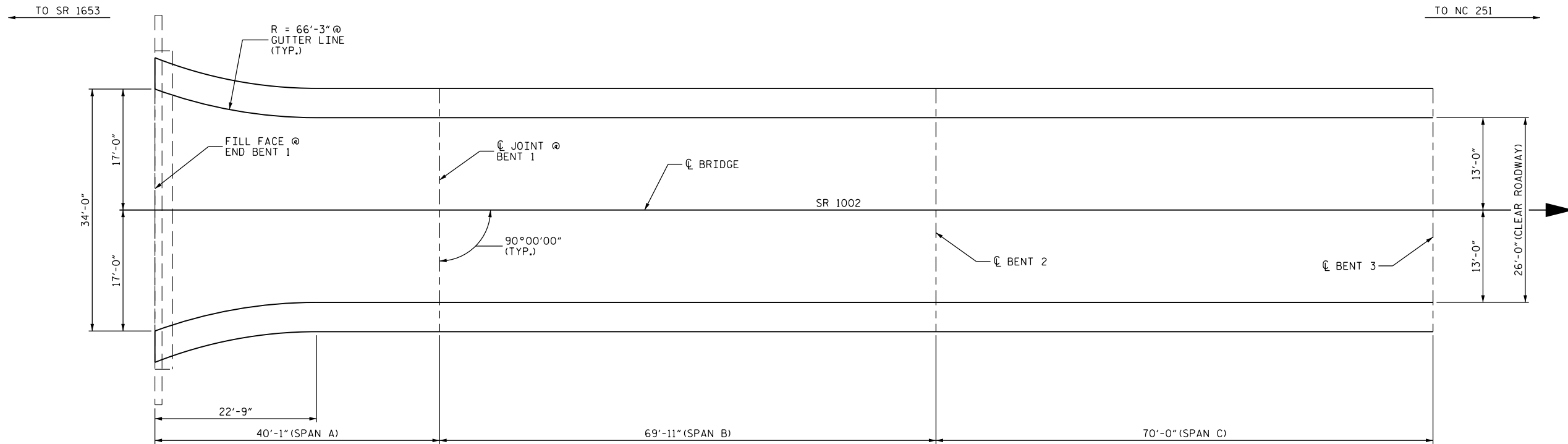
SUMMARY OF QUANTITIES

TOP OF DECK REPAIRS (SPANS A,B,&C)

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	527 SY	
CLASS II SURFACE PREPARATION	* 20 SY	
CLASS III SURFACE PREPARATION	* 3 SY	
CONCRETE FOR DECK REPAIR	* 60 CF	

* BECAUSE OF THE PRESENCE OF THE EXISTING ASPHALT WEARING SURFACE, QUANTITIES OF CLASS II AND CLASS III SURFACE PREPARATION AND CONCRETE FOR DECK REPAIR ARE UNKNOWN. QUANTITIES INDICATED ARE ESTIMATED FOR ESTABLISHING UNIT BID PRICES.

AFTER SCARIFICATION OF THE EXISTING ASPHALT WEARING SURFACE AND THE EXISTING CONCRETE DECK AS INDICATED, EXISTING DECK PATCHES SHALL BE REMOVED AND REPAIRED PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE OVERLAY. THE ENGINEER SHALL REVIEW THE PREPARED DECK TO DETERMINE THE AREAS THAT WILL REQUIRE CLASS II OR CLASS III REPAIRS. REPAIR AREAS THAT ARE FULL DECK DEPTH SHALL BE CONSIDERED CLASS III.



PLAN

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

SHEET 1 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPANS A, B, & C**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-7
2			4			18

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...
 6/17/2015

PROFESSIONAL SEAL
 NORTH CAROLINA
 ENGINEER
 18565
 TIMOTHY M. SHERRILL

DRAWN BY : R.PUTEK DATE : 5/2015
 CHECKED BY : T.M.SHERRILL DATE : 5/2015

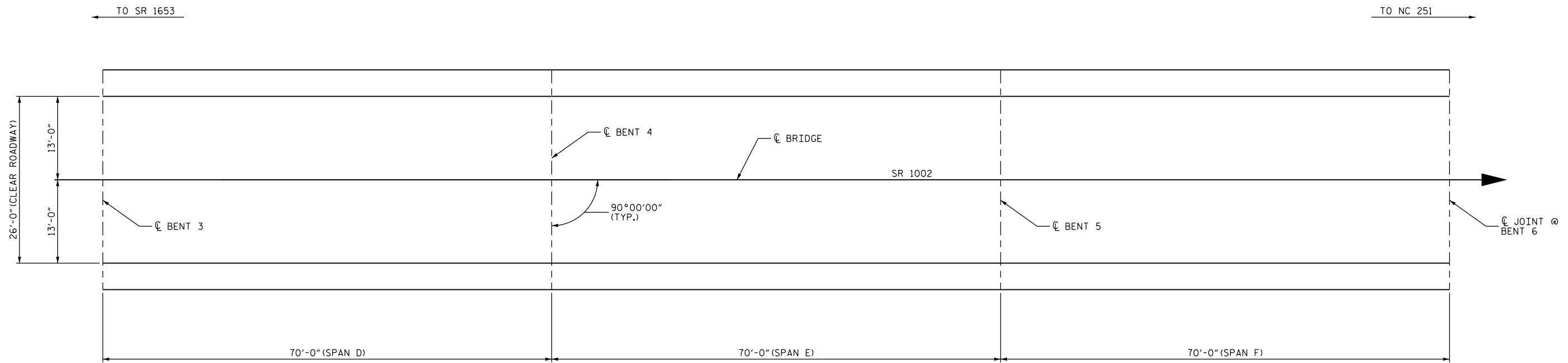
SUMMARY OF QUANTITIES

TOP OF DECK REPAIRS (SPANS D,E,&F)

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	607 SY	
CLASS II SURFACE PREPARATION	* 20 SY	
CLASS III SURFACE PREPARATION	* 3 SY	
CONCRETE FOR DECK REPAIR	* 60 CF	

* BECAUSE OF THE PRESENCE OF THE EXISTING ASPHALT WEARING SURFACE, QUANTITIES OF CLASS II AND CLASS III SURFACE PREPARATION AND CONCRETE FOR DECK REPAIR ARE UNKNOWN. QUANTITIES INDICATED ARE ESTIMATED FOR ESTABLISHING UNIT BID PRICES.

AFTER SCARIFICATION OF THE EXISTING ASPHALT WEARING SURFACE AND THE EXISTING CONCRETE DECK AS INDICATED, EXISTING DECK PATCHES SHALL BE REMOVED AND REPAIRED PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE OVERLAY. THE ENGINEER SHALL REVIEW THE PREPARED DECK TO DETERMINE THE AREAS THAT WILL REQUIRE CLASS II OR CLASS III REPAIRS. REPAIR AREAS THAT ARE FULL DECK DEPTH SHALL BE CONSIDERED CLASS III.



PLAN

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

SHEET 2 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPANS D, E, & F**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			18
2			4			

DocuSigned by:

Timothy M. Sherrill
 AD50B1D977494CC...

6/17/2015



DRAWN BY : R. PUTEK DATE : 5/2015
 CHECKED BY : T.M. SHERRILL DATE : 5/2015

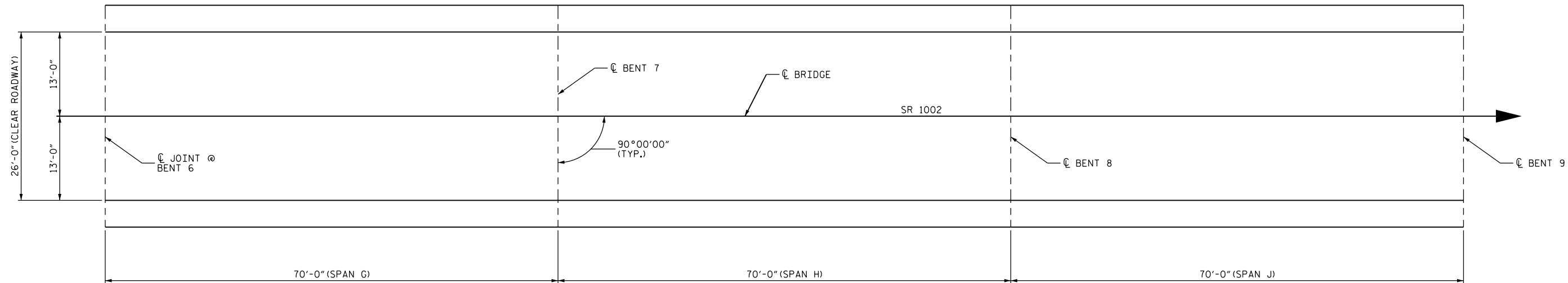
SUMMARY OF QUANTITIES

TOP OF DECK REPAIRS (SPANS G,H,&J)

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	607 SY	
CLASS II SURFACE PREPARATION	* 20 SY	
CLASS III SURFACE PREPARATION	* 3 SY	
CONCRETE FOR DECK REPAIR	* 60 CF	

* BECAUSE OF THE PRESENCE OF THE EXISTING ASPHALT WEARING SURFACE, QUANTITIES OF CLASS II AND CLASS III SURFACE PREPARATION AND CONCRETE FOR DECK REPAIR ARE UNKNOWN. QUANTITIES INDICATED ARE ESTIMATED FOR ESTABLISHING UNIT BID PRICES.

AFTER SCARIFICATION OF THE EXISTING ASPHALT WEARING SURFACE AND THE EXISTING CONCRETE DECK AS INDICATED, EXISTING DECK PATCHES SHALL BE REMOVED AND REPAIRED PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE OVERLAY. THE ENGINEER SHALL REVIEW THE PREPARED DECK TO DETERMINE THE AREAS THAT WILL REQUIRE CLASS II OR CLASS III REPAIRS. REPAIR AREAS THAT ARE FULL DECK DEPTH SHALL BE CONSIDERED CLASS III.



PLAN

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

SHEET 3 OF 4

DocuSigned by:

Timothy M. Sherrill

AD50B1D977494CC...

6/17/2015



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPANS G, H, & J**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-9
2			4			18

DRAWN BY : R. PUTEK DATE : 5/2015
 CHECKED BY : T.M. SHERRILL DATE : 5/2015

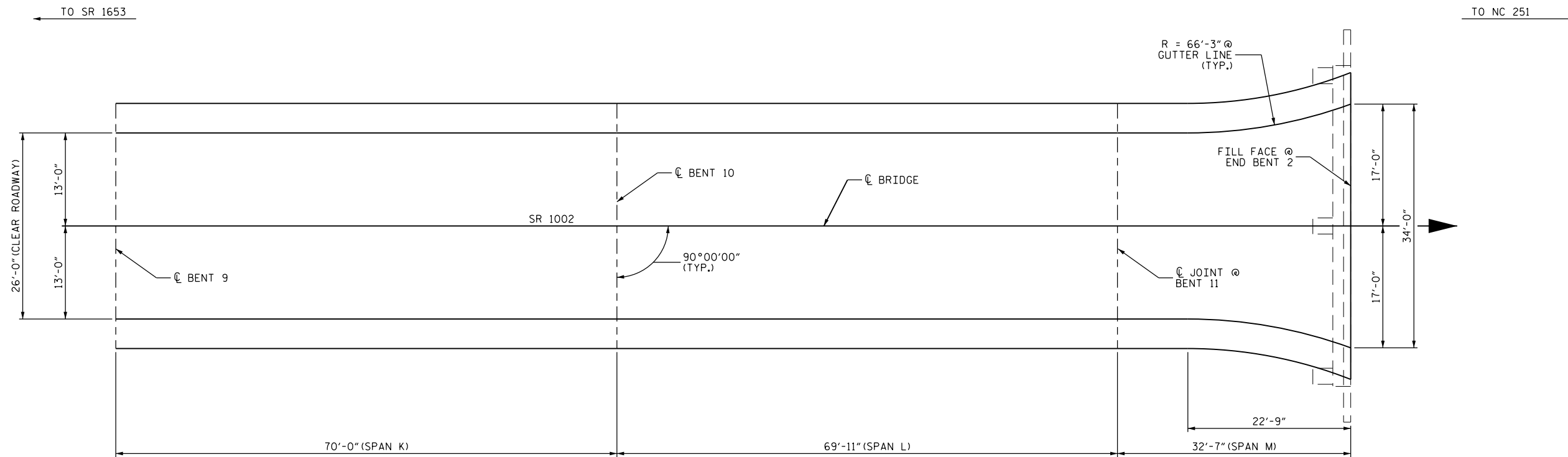
SUMMARY OF QUANTITIES

TOP OF DECK REPAIRS (SPANS K,L,&M)

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	505 SY	
CLASS II SURFACE PREPARATION	* 20 SY	
CLASS III SURFACE PREPARATION	* 3 SY	
CONCRETE FOR DECK REPAIR	* 60 CF	

* BECAUSE OF THE PRESENCE OF THE EXISTING ASPHALT WEARING SURFACE, QUANTITIES OF CLASS II AND CLASS III SURFACE PREPARATION AND CONCRETE FOR DECK REPAIR ARE UNKNOWN. QUANTITIES INDICATED ARE ESTIMATED FOR ESTABLISHING UNIT BID PRICES.

AFTER SCARIFICATION OF THE EXISTING ASPHALT WEARING SURFACE AND THE EXISTING CONCRETE DECK AS INDICATED, EXISTING DECK PATCHES SHALL BE REMOVED AND REPAIRED PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE OVERLAY. THE ENGINEER SHALL REVIEW THE PREPARED DECK TO DETERMINE THE AREAS THAT WILL REQUIRE CLASS II OR CLASS III REPAIRS. REPAIR AREAS THAT ARE FULL DECK DEPTH SHALL BE CONSIDERED CLASS III.



PLAN

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPANS K, L, & M**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			18

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...

6/17/2015

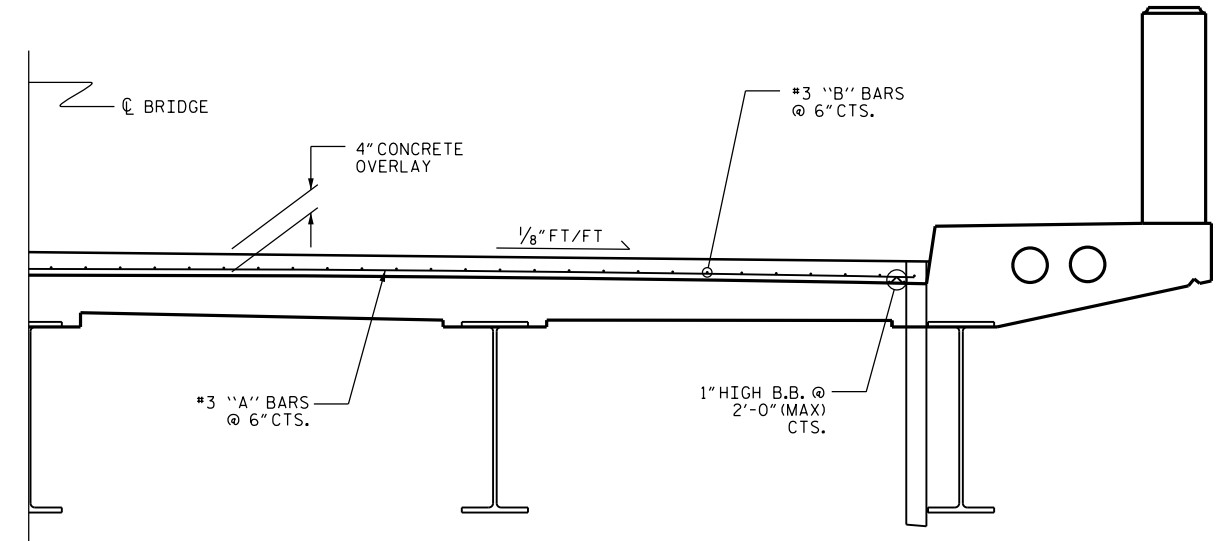
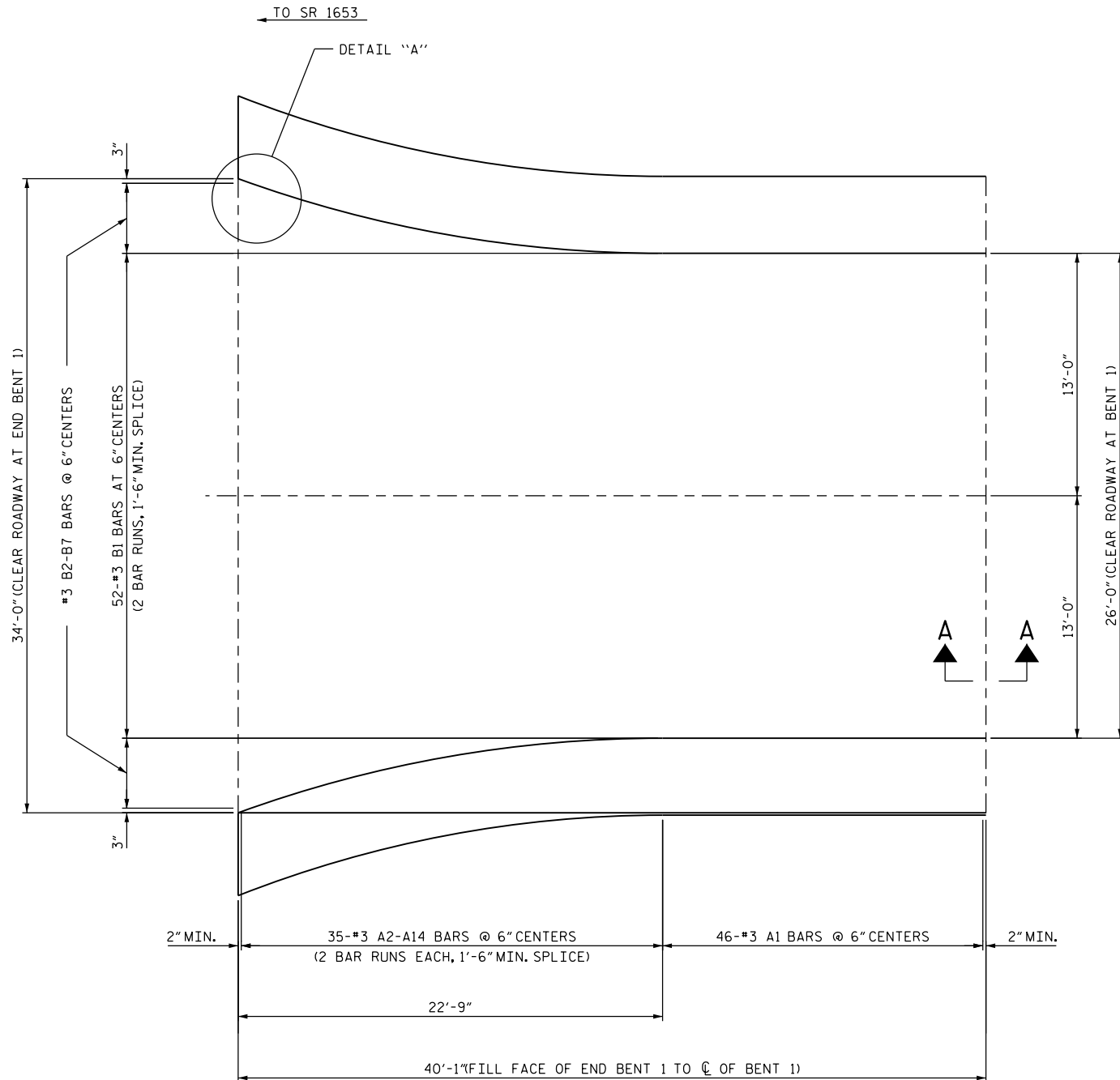


DRAWN BY : R. PUTEK DATE : 5/2015
 CHECKED BY : T.M. SHERRILL DATE : 5/2015

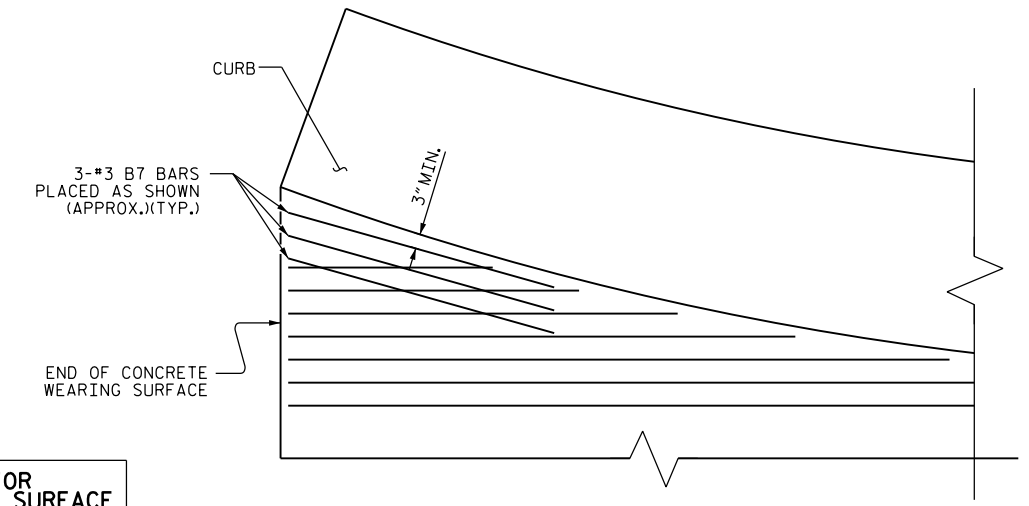
NOTES:

REINFORCING MAY BE ADJUSTED SLIGHTLY TO AVOID DECK DRAINS.

EXTENSION OF THE DECK DRAINS INTO THE CONCRETE WEARING SURFACE MAY BE ACCOMPLISHED BY FORMING OF THE DRAIN EXTENSION, EMBEDMENT OF 3" DIAMETER PVC PIPE IN THE WEARING SURFACE AT THE EXISTING DRAIN LOCATIONS, OR OTHER METHOD PROPOSED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT METHOD FOR APPROVAL, PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE.



REINFORCING FOR CONCRETE WEARING SURFACE
(HALF VIEW TYPICAL SECTION)



DETAIL A
(“A” BARS NOT SHOWN FOR CLARITY)

BILL OF MATERIAL FOR SPAN A CONCRETE WEARING SURFACE

BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
* A1	46	#3	STR	25'-6"	441 LBS
* A2	10	#3	STR	13'-9"	52 LBS
* A3	8	#3	STR	14'-0"	42 LBS
* A4	8	#3	STR	14'-4"	43 LBS
* A5	6	#3	STR	14'-8"	33 LBS
* A6	6	#3	STR	15'-0"	34 LBS
* A7	6	#3	STR	15'-4"	35 LBS
* A8	6	#3	STR	15'-8"	35 LBS
* A9	4	#3	STR	16'-1"	24 LBS
* A10	4	#3	STR	16'-7"	25 LBS
* A11	4	#3	STR	16'-9"	25 LBS
* A12	4	#3	STR	17'-1"	26 LBS
* A13	2	#3	STR	17'-4"	13 LBS
* A14	2	#3	STR	17'-7"	13 LBS
* B1	104	#3	STR	20'-8"	808 LBS
* B2	2	#3	STR	14'-4"	11 LBS
* B3	2	#3	STR	11'-0"	8 LBS
* B4	2	#3	STR	8'-5"	6 LBS
* B5	2	#3	STR	6'-3"	5 LBS
* B6	2	#3	STR	4'-5"	3 LBS
* B7	6	#3	STR	6'-0"	14 LBS
* EPOXY COATED REINFORCING STEEL					
CONCRETE WEARING SURFACE					1,105 SF

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494CC...

6/17/2015



PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
BRIDGE NO. 649

SHEET 1 OF 4

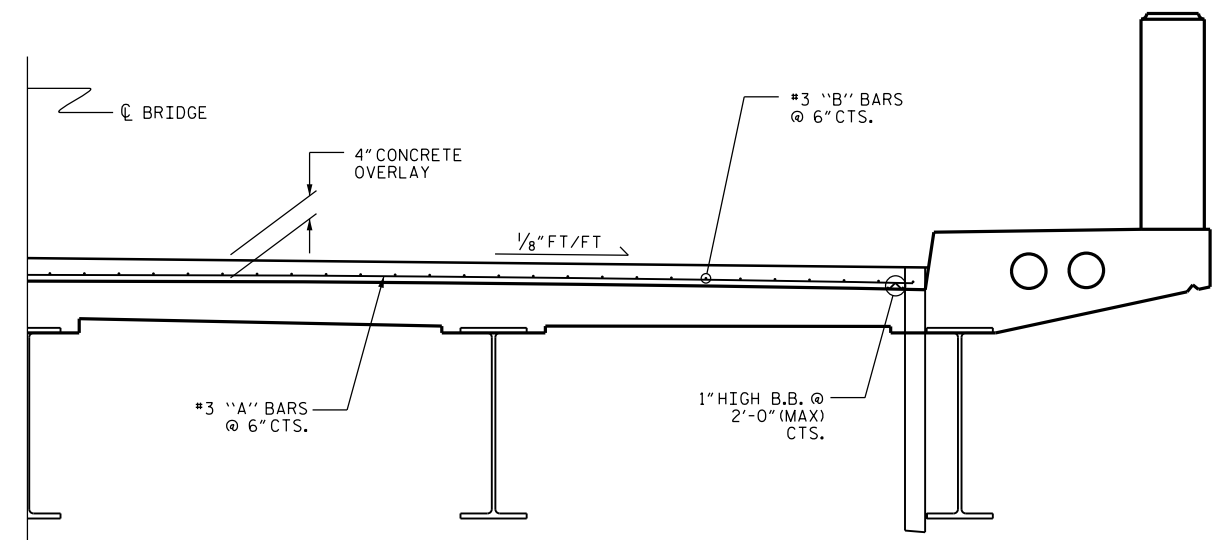
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CONCRETE WEARING SURFACE SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			18

DRAWN BY : M.A.LEE DATE : 5/2015
CHECKED BY : T.M.SHERRILL DATE : 5/2015

BILL OF MATERIAL FOR SPANS B-F CONCRETE WEARING SURFACE					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
* A1	702	#3	STR	25'-6"	6,730 LBS
* B8	676	#3	STR	28'-4"	7,202 LBS
* EPOXY COATED REINFORCING STEEL					
CONCRETE WEARING SURFACE					9,098 SF



REINFORCING FOR CONCRETE WEARING SURFACE
(HALF VIEW TYPICAL SECTION)

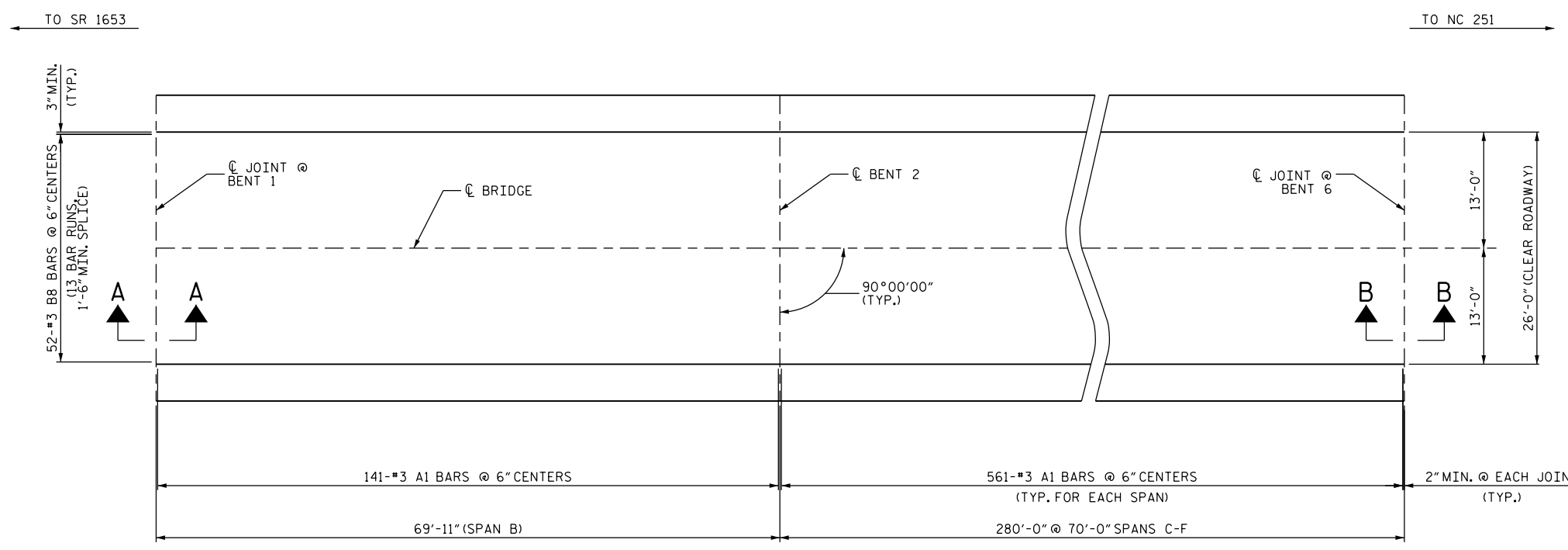
NOTES:

REINFORCING MAY BE ADJUSTED SLIGHTLY TO AVOID DECK DRAINS.

EXTENSION OF THE DECK DRAINS INTO THE CONCRETE WEARING SURFACE MAY BE ACCOMPLISHED BY FORMING OF THE DRAIN EXTENSION, EMBEDMENT OF 3" DIAMETER PVC PIPE IN THE WEARING SURFACE AT THE EXISTING DRAIN LOCATIONS, OR OTHER METHOD PROPOSED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT METHOD FOR APPROVAL, PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE.

AFTER PLACEMENT OF CONCRETE WEARING SURFACE, PROVIDE CONTRACTION JOINT ALONG THE CENTERLINE OF INTERIOR BENTS 2, 3, 4, AND 5. SEE CONTRACTION JOINT DETAILS SHEET.

TRANSVERSE CONSTRUCTION JOINTS ARE ALLOWED ONLY AT THE CENTERLINE OF INTERIOR BENTS. LONGITUDINAL CONSTRUCTION JOINTS ARE ALLOWED ONLY ALONG THE CENTERLINE OF THE BRIDGE. FOR TREATMENT OF CONSTRUCTION JOINTS, SEE CONTRACTION JOINT DETAILS SHEET.



PLAN

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

SHEET 2 OF 4

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...

6/17/2015



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CONCRETE WEARING SURFACE SPAN B-F

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS
2			4			18

DRAWN BY: M.A.LEE DATE: 5/2015
 CHECKED BY: T.M.SHERRILL DATE: 5/2015

BILL OF MATERIAL FOR SPANS G-L CONCRETE WEARING SURFACE					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
* A1	702	#3	STR	25'-6"	6,730 LBS
* B8	676	#3	STR	28'-4"	7,202 LBS
* EPOXY COATED REINFORCING STEEL					
CONCRETE WEARING SURFACE					9,098 SF

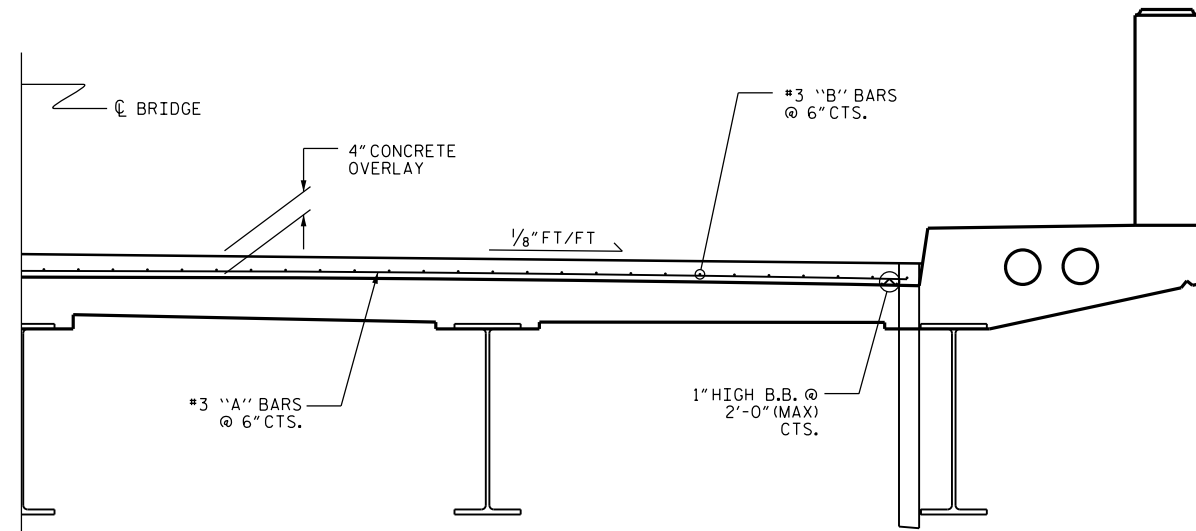
NOTES:

REINFORCING MAY BE ADJUSTED SLIGHTLY TO AVOID DECK DRAINS.

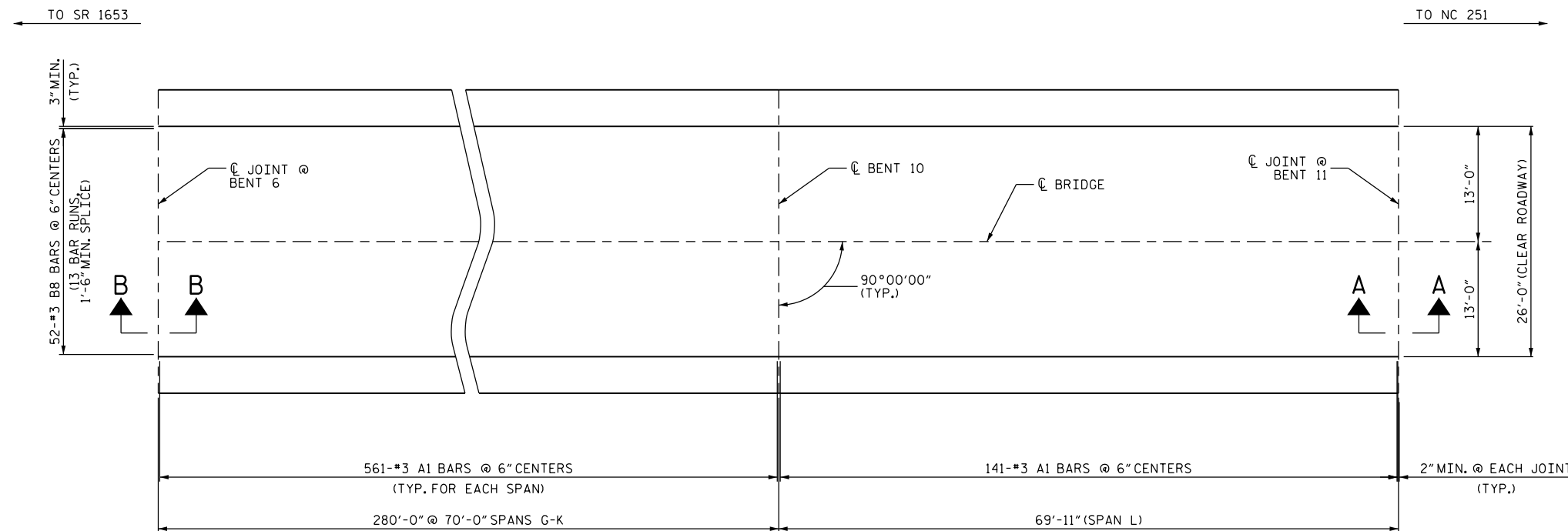
EXTENSION OF THE DECK DRAINS INTO THE CONCRETE WEARING SURFACE MAY BE ACCOMPLISHED BY FORMING OF THE DRAIN EXTENSION, EMBEDMENT OF 3" DIAMETER PVC PIPE IN THE WEARING SURFACE AT THE EXISTING DRAIN LOCATIONS, OR OTHER METHOD PROPOSED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT METHOD FOR APPROVAL, PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE.

AFTER PLACEMENT OF CONCRETE WEARING SURFACE, PROVIDE CONTRACTION JOINT ALONG THE CENTERLINE OF INTERIOR BENTS 7, 8, 9, AND 10. SEE CONTRACTION JOINT DETAILS SHEET.

TRANSVERSE CONSTRUCTION JOINTS ARE ALLOWED ONLY AT THE CENTERLINE OF INTERIOR BENTS. LONGITUDINAL CONSTRUCTION JOINTS ARE ALLOWED ONLY ALONG THE CENTERLINE OF THE BRIDGE. FOR TREATMENT OF CONSTRUCTION JOINTS, SEE CONTRACTION JOINT DETAILS SHEET.



REINFORCING FOR CONCRETE WEARING SURFACE
(HALF VIEW TYPICAL SECTION)



PLAN

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
BRIDGE NO. 649

SHEET 3 OF 4

DocuSigned by:

Timothy M. Sherrill
AD50B1D977494CC...

6/17/2015



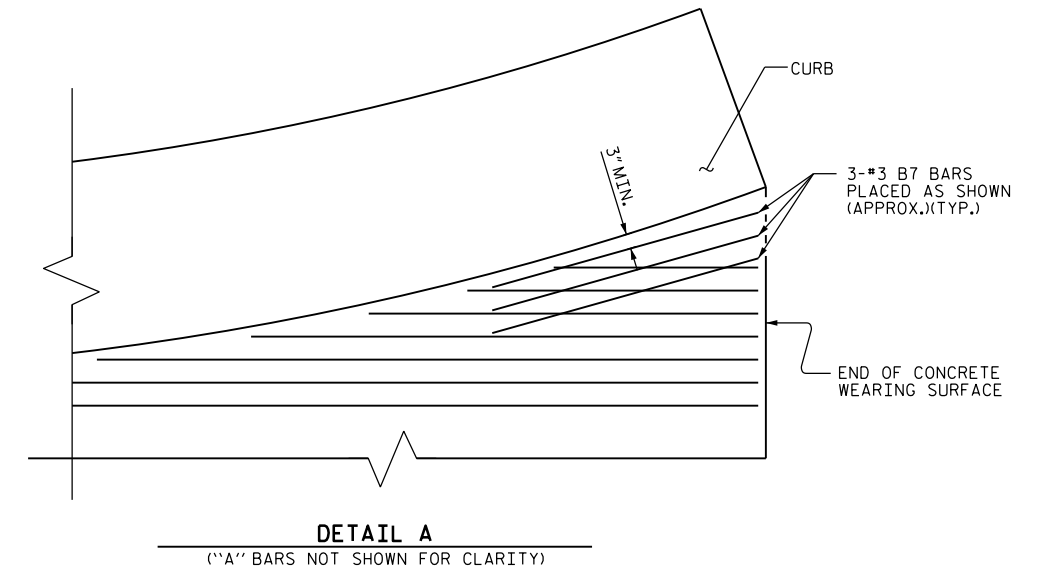
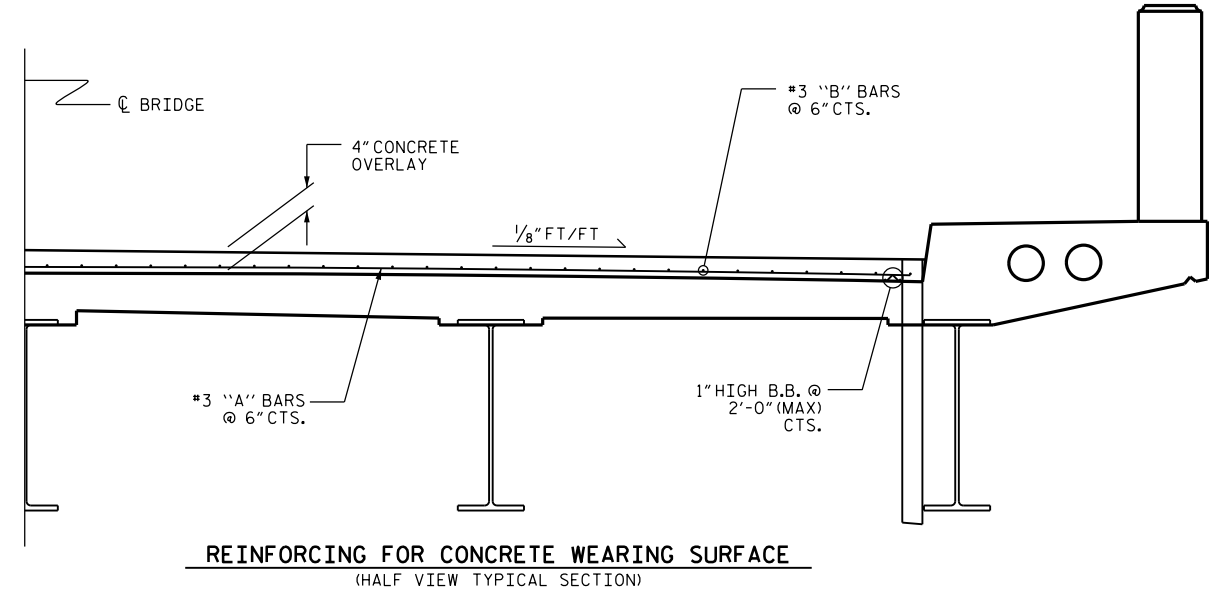
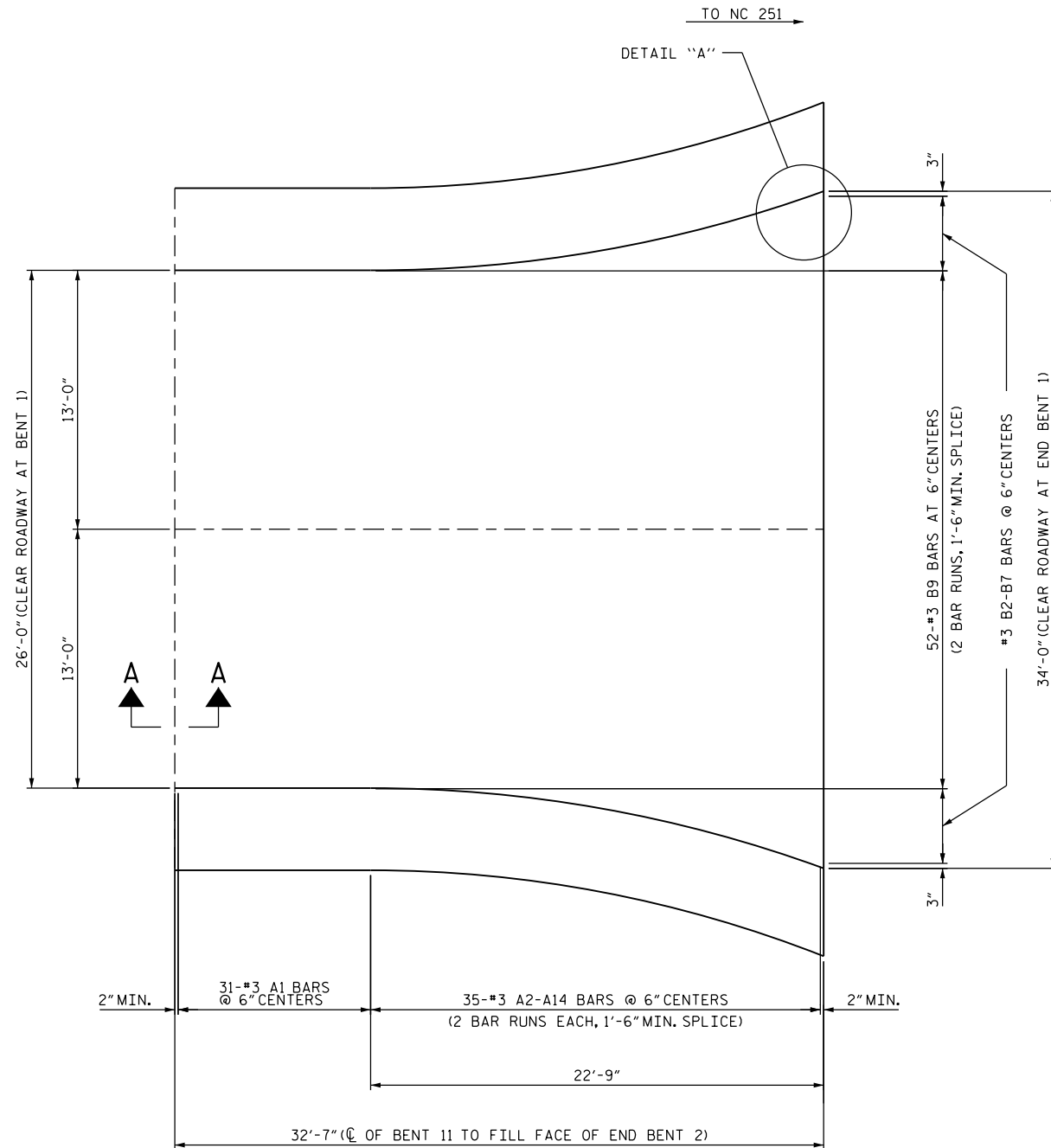
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
CONCRETE WEARING SURFACE SPAN G-L					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-13
					TOTAL SHEETS
					18

DRAWN BY: M.A.LEE DATE: 5/2015
CHECKED BY: T.M.SHERRILL DATE: 5/2015

NOTES:

REINFORCING MAY BE ADJUSTED SLIGHTLY TO AVOID DECK DRAINS.

EXTENSION OF THE DECK DRAINS INTO THE CONCRETE WEARING SURFACE MAY BE ACCOMPLISHED BY FORMING OF THE DRAIN EXTENSION, EMBEDMENT OF 3" DIAMETER PVC PIPE IN THE WEARING SURFACE AT THE EXISTING DRAIN LOCATIONS, OR OTHER METHOD PROPOSED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT METHOD FOR APPROVAL, PRIOR TO PLACEMENT OF THE CONCRETE WEARING SURFACE.



BILL OF MATERIAL FOR SPAN M CONCRETE WEARING SURFACE

BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	
* A1	31	#3	STR	25'-6"	297 LBS	
* A2	10	#3	STR	13'-9"	52 LBS	
* A3	8	#3	STR	14'-0"	42 LBS	
* A4	8	#3	STR	14'-4"	43 LBS	
* A5	6	#3	STR	14'-8"	33 LBS	
* A6	6	#3	STR	15'-0"	34 LBS	
* A7	6	#3	STR	15'-4"	35 LBS	
* A8	6	#3	STR	15'-8"	35 LBS	
* A9	4	#3	STR	16'-1"	24 LBS	
* A10	4	#3	STR	16'-7"	25 LBS	
* A11	4	#3	STR	16'-9"	25 LBS	
* A12	4	#3	STR	17'-1"	26 LBS	
* A13	2	#3	STR	17'-4"	13 LBS	
* A14	2	#3	STR	17'-7"	13 LBS	
* B2	2	#3	STR	14'-4"	11 LBS	
* B3	2	#3	STR	11'-0"	8 LBS	
* B4	2	#3	STR	8'-5"	6 LBS	
* B5	2	#3	STR	6'-3"	5 LBS	
* B6	2	#3	STR	4'-5"	3 LBS	
* B7	6	#3	STR	6'-0"	14 LBS	
* B9	104	#3	STR	16'-11"	662 LBS	
* EPOXY COATED REINFORCING STEEL						
CONCRETE WEARING SURFACE					-	907 SF

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494CC...

6/17/2015



PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
BRIDGE NO. 649

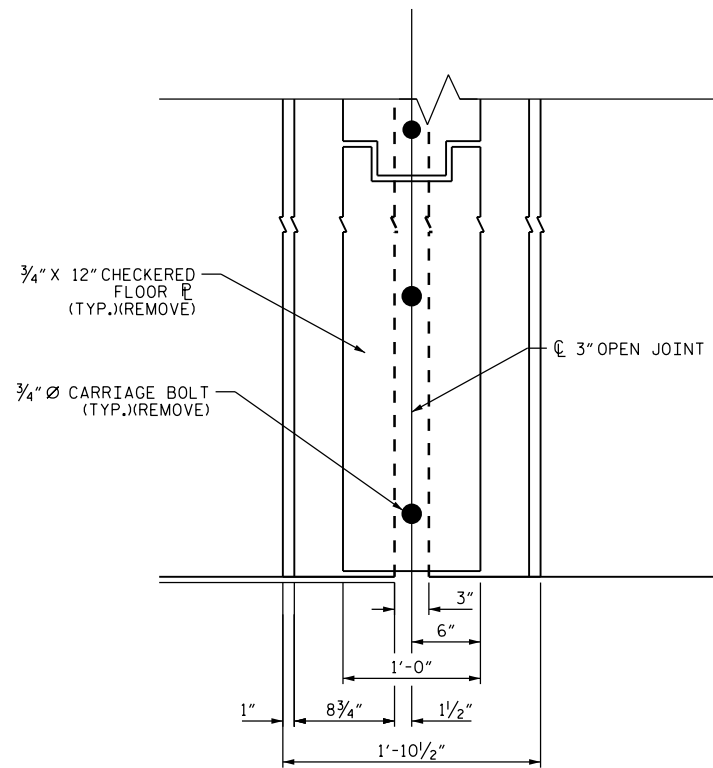
SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CONCRETE WEARING SURFACE SPAN M

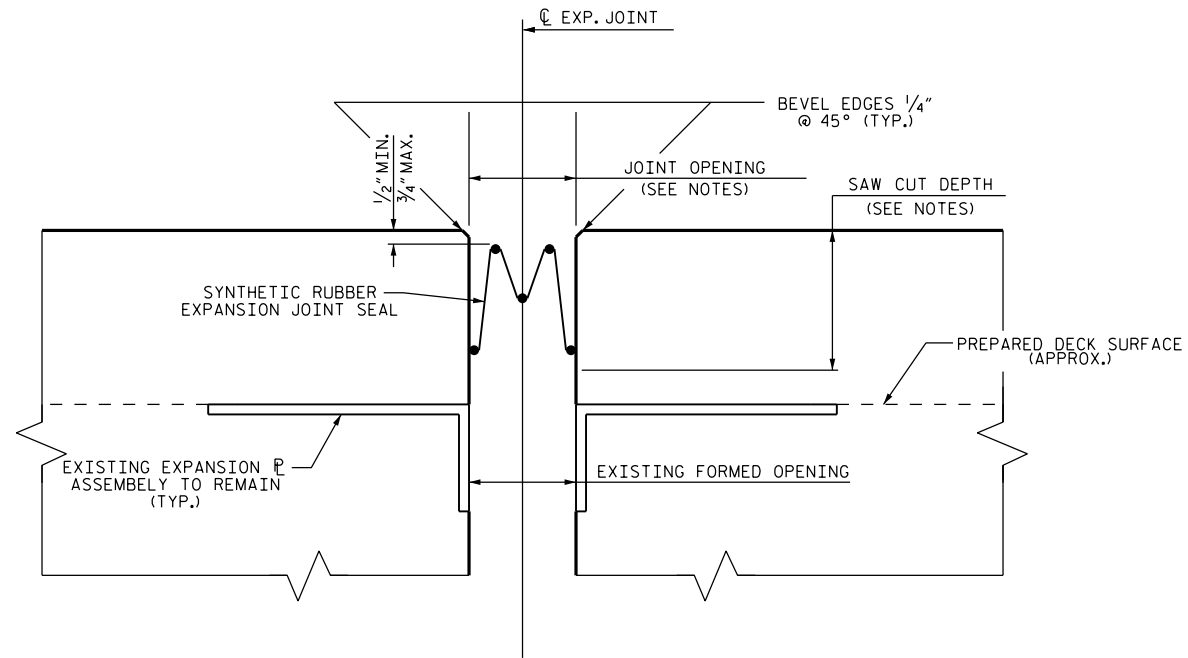
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			18

DRAWN BY : M.A.LEE DATE : 5/2015
CHECKED BY : T.M.SHERRILL DATE : 5/2015



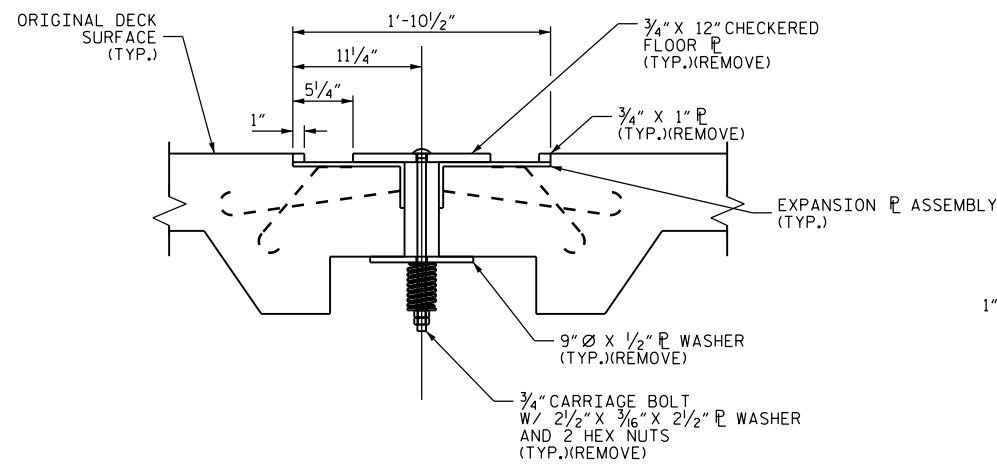
PLAN

(EXISTING EXPANSION JOINT)
(BENT 1 & 11)



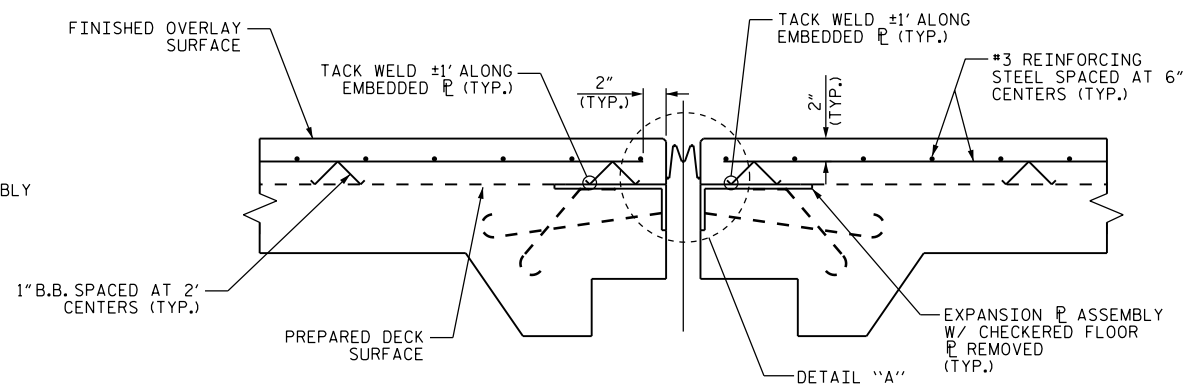
DETAIL A

(REINFORCING STEEL NOT SHOWN FOR CLARITY)



EXISTING

(BENT 1 & 11)
(AWS NOT SHOWN FOR CLARITY)



PROPOSED

(BENT 1 & 11)

SECTION A-A

NOTES

EXISTING DIMENSIONS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS OR CONDITIONS DIFFER.

AFTER REMOVAL OF AWS, REMOVE CARRIAGE BOLTS, NUTS, SPRINGS, AND WASHERS, AS WELL AS THE CHECKERED FLOOR PLATE AND OTHER APPURTENANCES ASSOCIATED WITH THE JOINT. SPRING SEAL AND PLATE. ALSO REMOVE THE 3/4" X 1" PLATE ON ON THE EMBEDDED ANGLES, ON EACH SIDE OF THE JOINT.

THE CONTRACTOR SHALL CONSTRUCT OR SAW THE OPENING FOR THE SYNTHETIC RUBBER EXPANSION JOINT SEAL BASED UPON THE MANUFACTURER'S RECOMMENDATIONS. FOR ALL TEMPERATURE RANGES, THE JOINT WIDTH MAY NOT BE LESS THAN 1" OR GREATER THAN 3/2". THE CONTRACTOR SHALL INSTALL JOINT SEAL ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS.

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

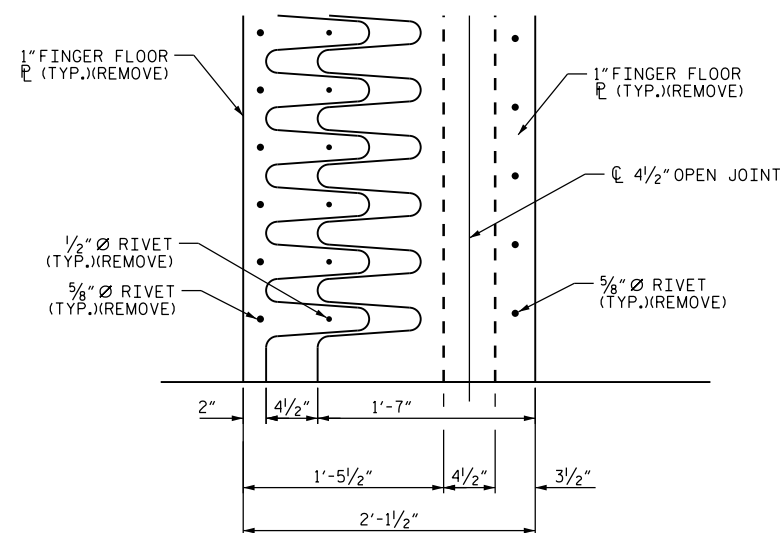
DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...

6/17/2015

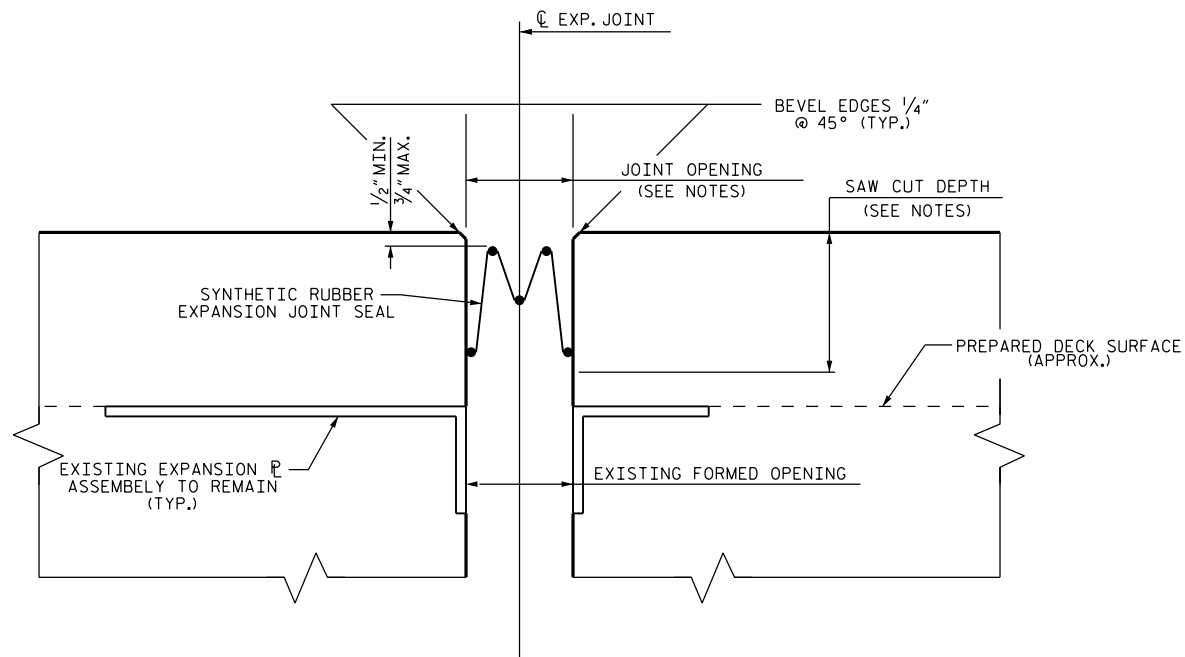


STATE OF NORTH CAROLINA						SHEET NO.	
DEPARTMENT OF TRANSPORTATION						S-15	
RALEIGH						TOTAL SHEETS	
BRIDGE DECK JOINT						18	
AT BENTS 1 & 11							
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

DRAWN BY: M.A.LEE DATE: 5/2015
 CHECKED BY: T.M.SHERRILL DATE: 5/2015



PLAN
(EXISTING EXPANSION JOINT)
(BENT 6)

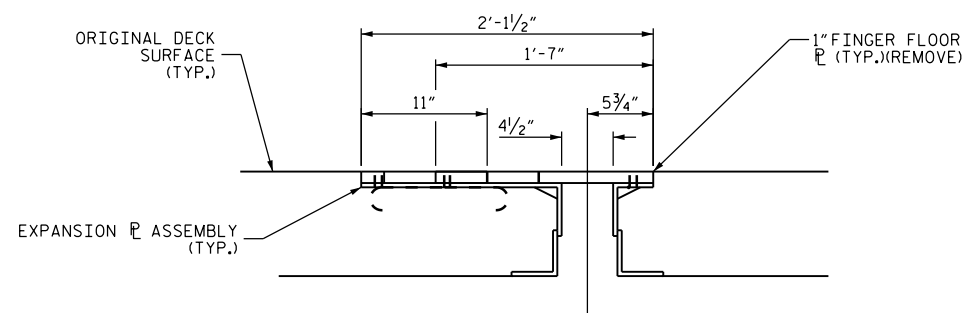


DETAIL A
(REINFORCING STEEL NOT SHOWN FOR CLARITY)

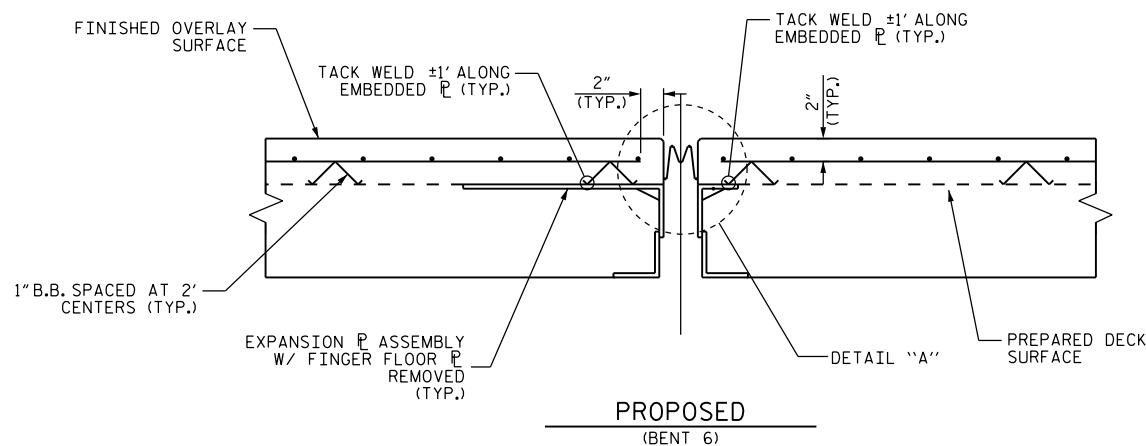
NOTES
EXISTING DIMENSIONS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS OR CONDITIONS DIFFER.

AFTER REMOVAL OF AWS, REMOVE 1" FINGER FLOOR PLATES ON EACH SIDE OF THE JOINT. REMOVE RIVETS OR GRIND RIVETS SMOOTH WITH SURFACE OF THE EMBEDDED ANGLE/ PLATE

THE CONTRACTOR SHALL CONSTRUCT OR SAW THE OPENING FOR THE SYNTHETIC RUBBER EXPANSION JOINT SEAL BASED UPON THE MANUFACTURER'S RECOMMENDATIONS. FOR ALL TEMPERATURE RANGES, THE JOINT WIDTH MAY NOT BE LESS THAN 1" OR GREATER THAN 3/2". THE CONTRACTOR SHALL INSTALL JOINT SEAL ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS.



EXISTING
(BENT)
(AWS NOT SHOWN FOR CLARITY)



PROPOSED
(BENT 6)

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
BRIDGE NO. 649

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**BRIDGE DECK JOINT
AT BENT 6**

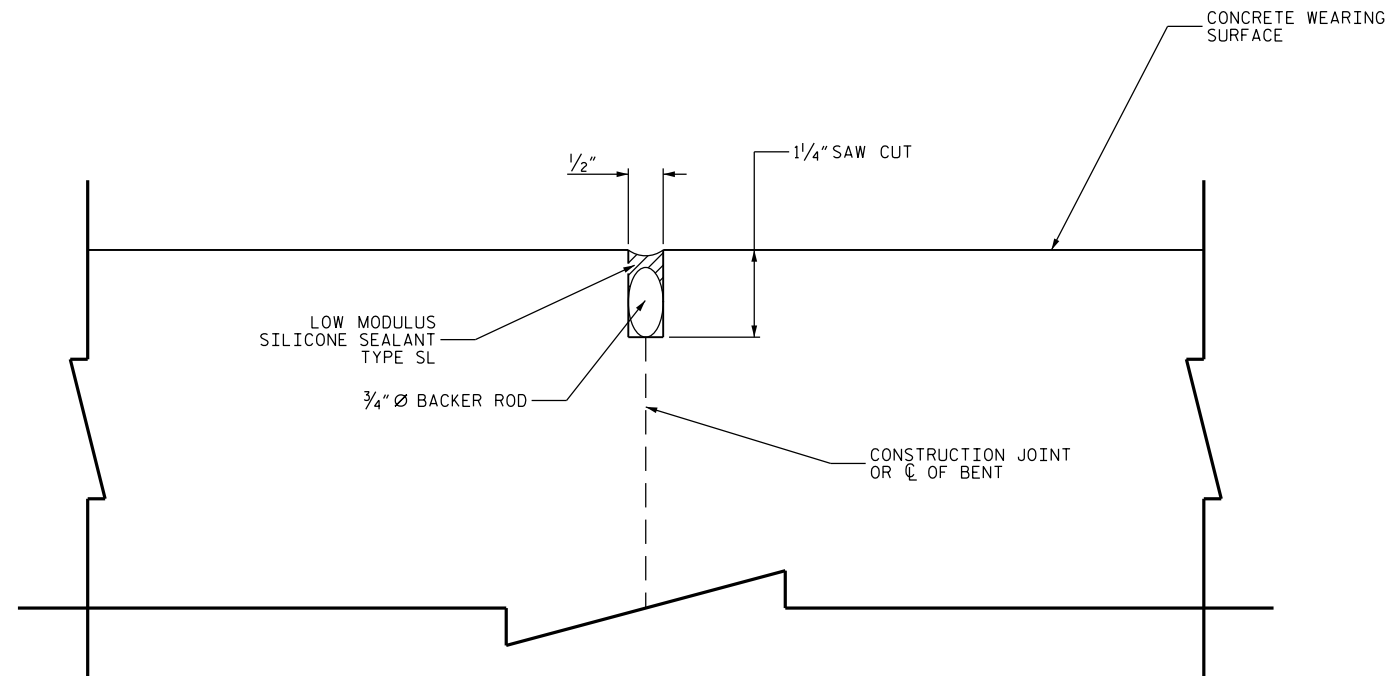
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			18
2			4			

DocuSigned by:
Timothy M. Sherrill
AD50B1D977494CC...



6/17/2015

DRAWN BY : M.A. LEE DATE : 5/2015
CHECKED BY : T.M. SHERRILL DATE : 5/2015



DETAIL
(TYPICAL)

NOTES

PROVIDE SAW CUT AS SOON AS PRACTICAL AFTER SETTING OF CONCRETE, BUT NO LATER THAN 4 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

3/4" BACKER ROD SHALL BE CLOSED CELL EXPANDED POLYETHYLENE FOAM TYPE L. NO SEPARATE PAYMENT FOR LABOR, MATERIALS, AND EQUIPMENT NEEDED TO CONSTRUCT CONCRETE JOINT SEALS SHALL BE MADE. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.

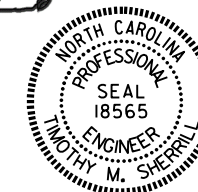
PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**CONTRACTION
 JOINT DETAILS**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			17
2			4			18

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...



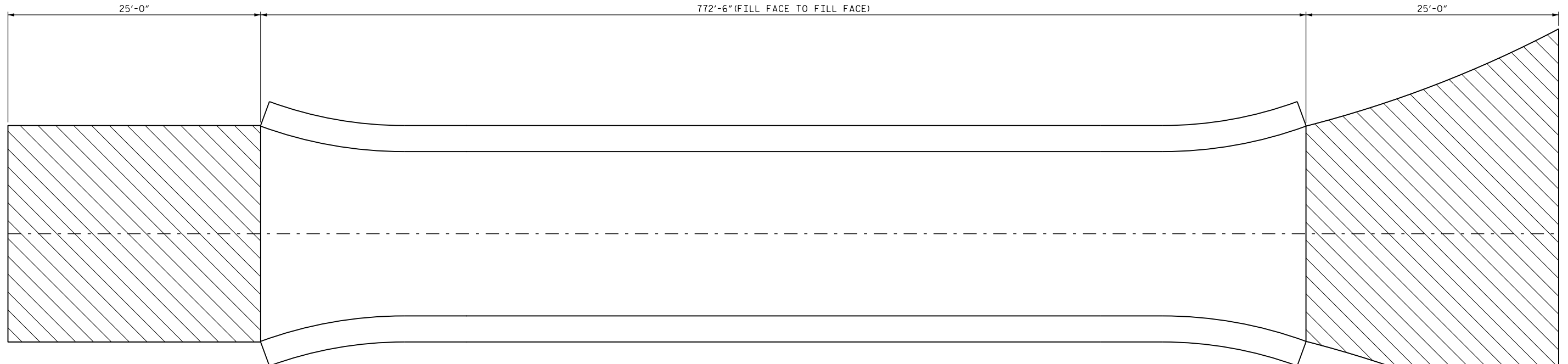
6/17/2015

DRAWN BY : R. PUTEK DATE : 05/15
 CHECKED BY : T. SHERRILL DATE : 05/15

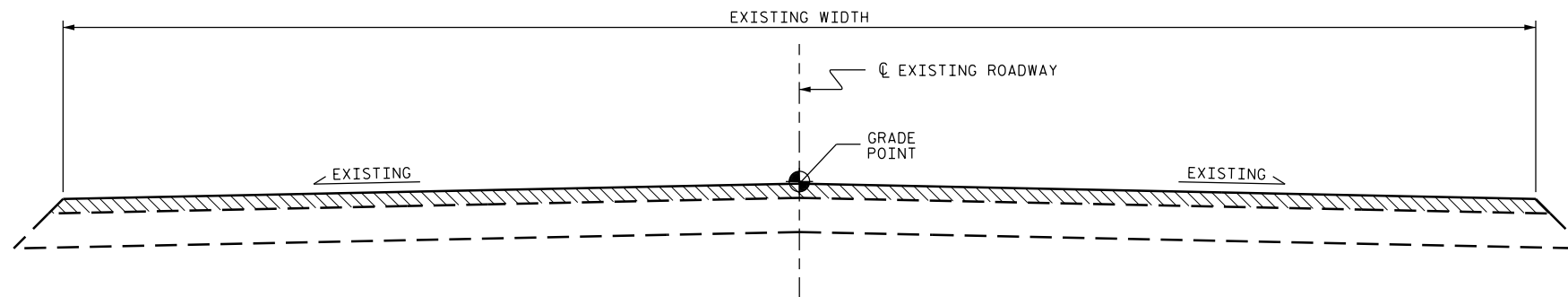
NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.

LAYOUT OF APPROACH ROADWAY AT THE EAST END OF THE BRIDGE IS FOR ILLUSTRATIVE PURPOSES ONLY. ESTIMATED QUANTITIES ARE APPROXIMATE. MILL THE APPROACH ROADWAY TO WEST EDGE OF PAVEMENT OF NC251. PAYMENT OF MILLING AND NEW APPROACH ASPHALT WILL BE FOR THE ACTUAL QUANTITIES MILLED AND PLACED.



PLAN



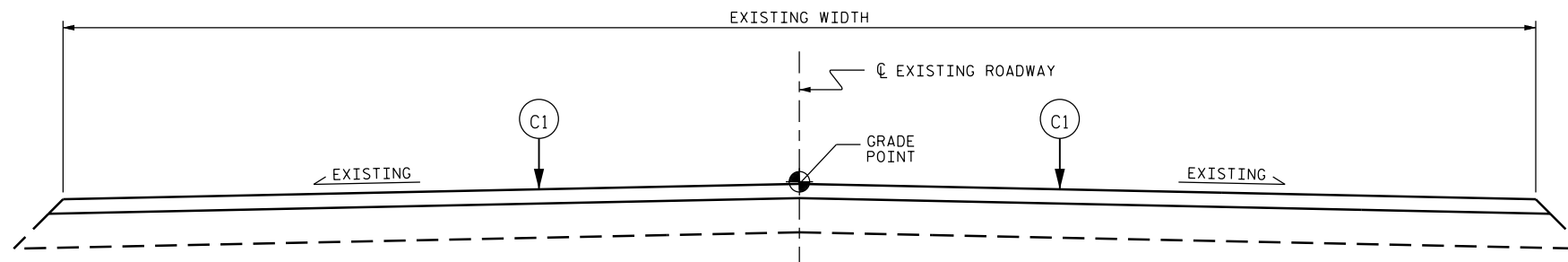
TYPICAL ROADWAY MILLING SECTION

INCIDENTAL MILLING

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	189 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	19 TONS	

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.

PROJECT NO. 15B.22.22
BUNCOMBE COUNTY
 BRIDGE NO. 649



TYPICAL PROPOSED ROADWAY SECTION

DocuSigned by:
Timothy M. Sherrill
 AD50B1D977494CC...

6/17/2015



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**APPROACH MILLING
 AND
 TYPICAL ROADWAY
 SECTION**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-18
2			4			TOTAL SHEETS 18

DRAWN BY : M.A.LEE DATE : 5/2015
 CHECKED BY : T.M.SHERRILL DATE : 5/2015

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	--	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT.
		(MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINISHES AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

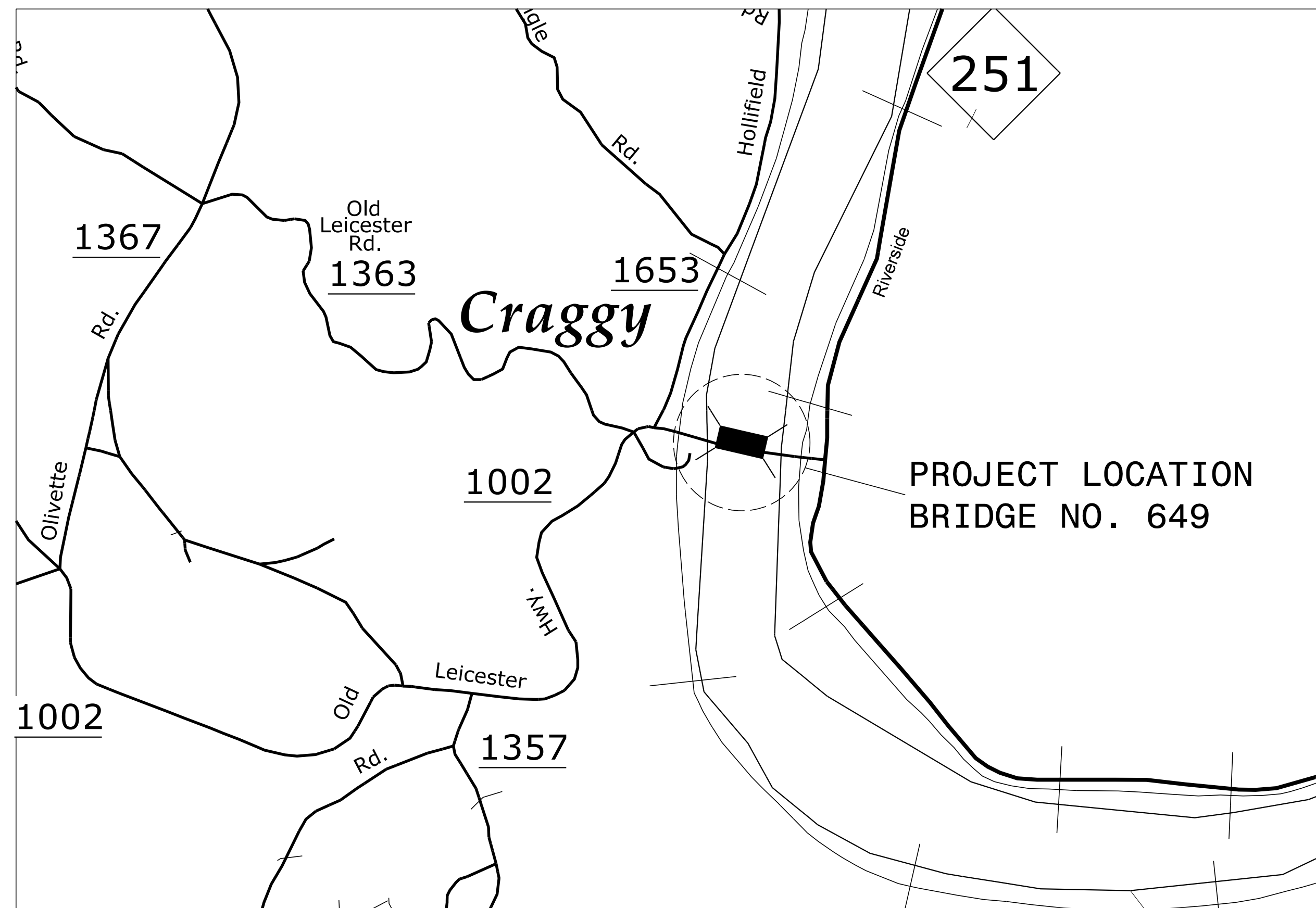
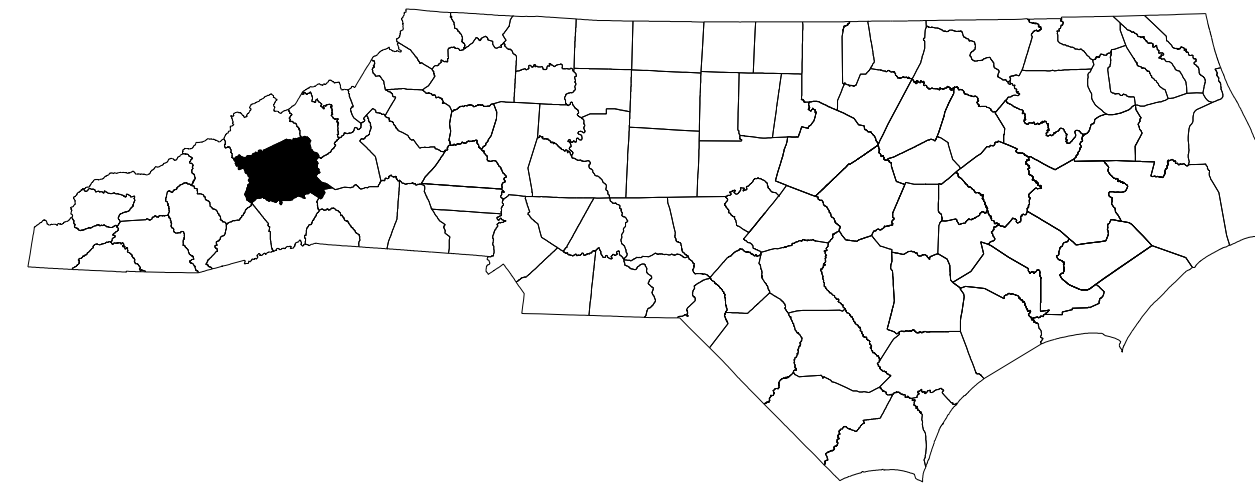
JANUARY, 1990

STD. NO. SN

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BUNCOMBE COUNTY



INDEX OF SHEETS

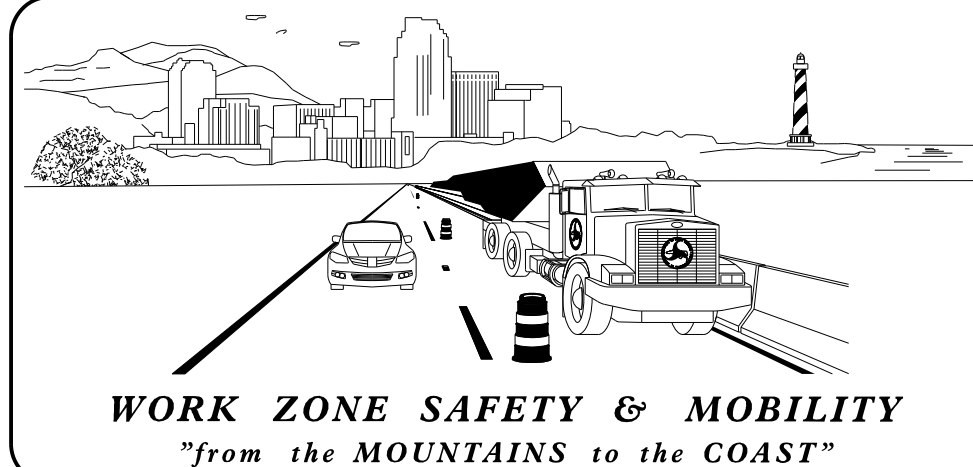
SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-2	SPECIAL SIGN DESIGN
TMP-3	OFF-SITE DETOUR AND BARRICADE PLACEMENT

SHEET NO.
TMP-1

15B.22.22

TIP PROJECT:

6/15/2015
C:\Users\shassan\Desktop\Asheville\TMP-1.dgn
User:shassan



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — STATE TRAFFIC MANAGEMENT ENGINEER
J. W. WOOLARD, P.E. — TRAFFIC CONTROL PROJECT ENGINEER
R. M. GARRETT — TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. HASSAN, P.E. — TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: *J. W. Woolard Jr.*
DATE: 6/16/2015

SEAL



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

USER DEFINED (IF NEEDED)

USER DEFINED (IF NEEDED)

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

APPROVED: <small>879C18EBAD84427</small>			ROADWAY STANDARD DRAWINGS & LEGEND
DATE: 6/16/2015 SEAL			

MANAGEMENT STRATEGIES

THE FOLLOWING LISTED STRATEGIES DERIVE FROM DETAILED DESIGN LEVEL ASSESSMENTS OF THE WORK ZONE IMPACTS CONDUCTED DURING THE DEVELOPMENTAL STAGES OF THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED MANAGEMENT STRATEGIES RELATIVE TO THIS TMP ARE AS FOLLOWS:

-FULL ROAD CLOSURE

TRAFFIC TO BE MAINTAINED ON THE FOLLOWING OFF-SITE DETOUR ROUTE THROUGHOUT THE DURATION OF THIS PROJECT:

- SR 1002 (OLD LEICESTER RD / OLD LEICESTER HWY)
- SR 1357 (GORMAN BRIDGE RD)
- SR 1353 (ADAMS HILL RD)
- SR 1349 (ADAMS HILL RD)
- SR 1348 (PEARSON BRIDGE RD)
- SR 1447 (RIVERSIDE RD)
- NC 251 (RIVERSIDE RD)

PHASING

STEP 1: USING ROADWAY STANDARD DRAWING 1101.03, SHEET 1 AND 2 OF 9; AND SHEETS TMP-2 AND TMP-3, COMPLETE THE FOLLOWING:

- A) INSTALL DETOUR AND WARNING SIGNS.
- B) PLACE TYPE III BARRICADES TO CLOSE SR 1002 (OLD LEICESTER RD) TO THROUGH TRAFFIC, AND PLACE TRAFFIC ONTO PROPOSED DETOUR.

STEP 2: AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING:

- A) PERFORM STRUCTURE REHABILITATION WORK ON EXISTING STRUCTURE NO. 649. SEE STRUCTURES PLANS.
- B) CONSTRUCT PROPOSED ROADWAY UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE. SEE STRUCTURES PLANS.
- C) PLACE FINAL PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.

STEP 3: A) OPEN SR 1002 TO FINAL TRAFFIC PATTERN.

- B) REMOVE ALL REMAINING WORK ZONE TRAFFIC CONTROL DEVICES.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- B) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

- C) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

- D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

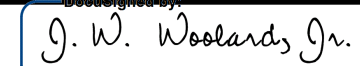


TRAFFIC CONTROL DEVICES

- E) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

- G) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS DIRECTED BY THE ENGINEER.

- H) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

APPROVED:  <small>079C18E8AD28427</small> DATE: 6/16/2015			<h1 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h1>
--	---	---	--

SIGN NUMBER: SP15115 **BACKG COLOR:** Fluorescent Orange
TYPE: STATIONARY **COPY COLOR:** Black
QUANTITY: SEE PLANS

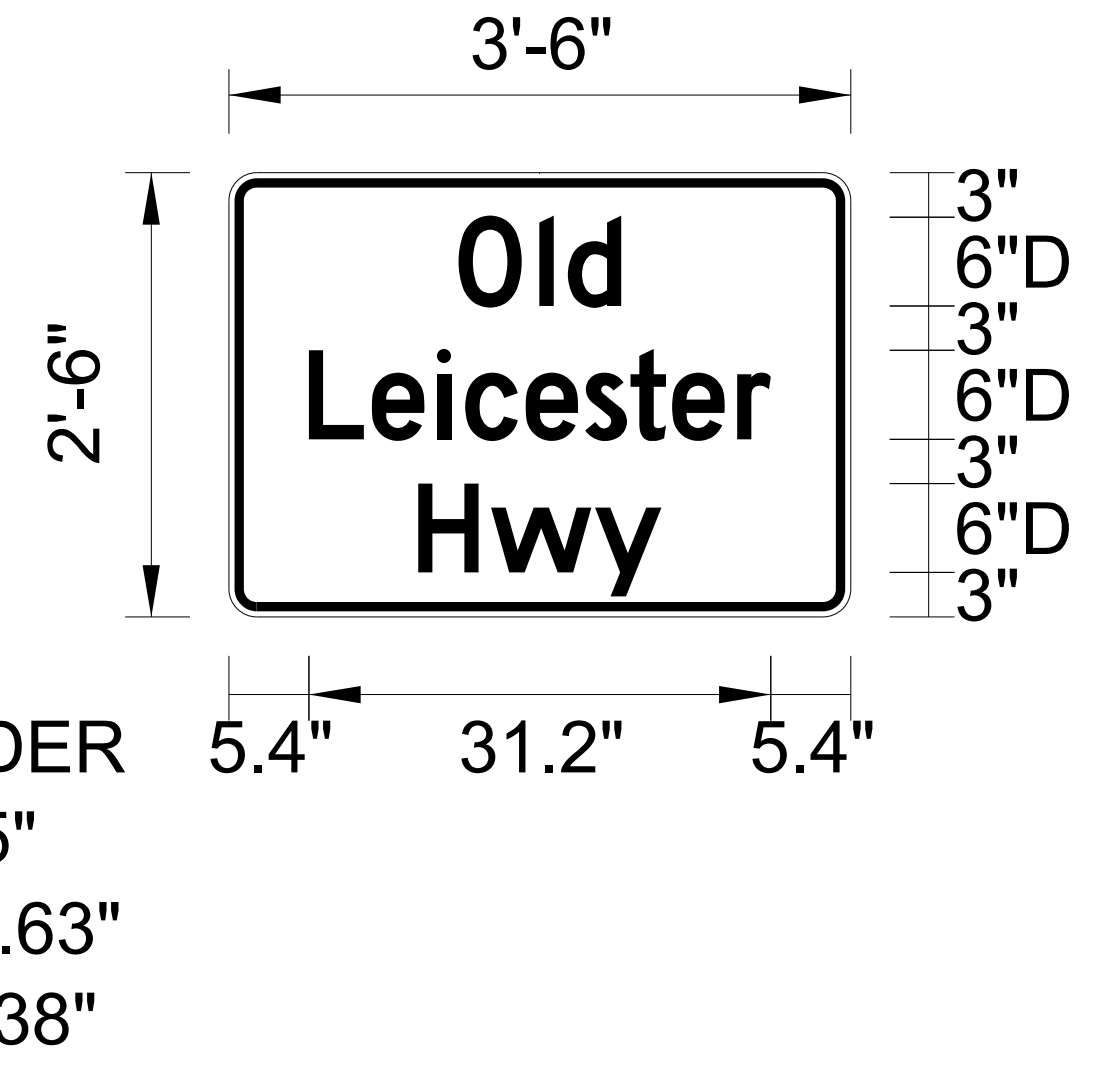
SYMBOL	X	Y	WID	HT

SIGN WIDTH: 3'-6"
HEIGHT: 2'-6"
TOTAL AREA: 8.8 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS: **MAT'L:** 0.080" (2.0 mm) ALUMINUM
LENGTH:

DESIGN BY: MT **CHECKED BY:** Jun 09, 2015
PROJECT ID: **LOCATION:** **DIV:** 13



USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

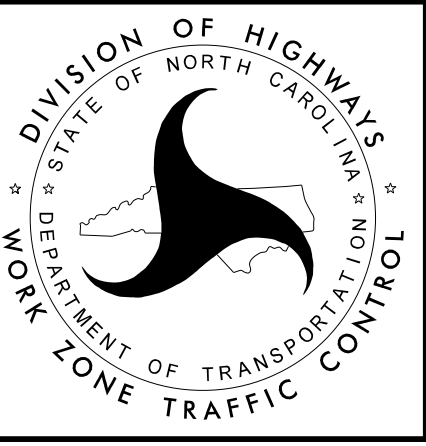
Letter spacings are to start of next letter											Series/Size
	o	l	d								Text Length
	15.5	5.5	1.9	3.6	15.5						D 2000
											11
		L	e	i	c	e	s	t	e	r	D 2000
	5.4	4.3	4.4	1.9	4.1	4	3.1	2.8	4.4	2.3	31.2
		H	w	y							D 2000
	12.8	4.9	7	4.5	12.8						16.4

FILENAME: Old Leicester Hwy

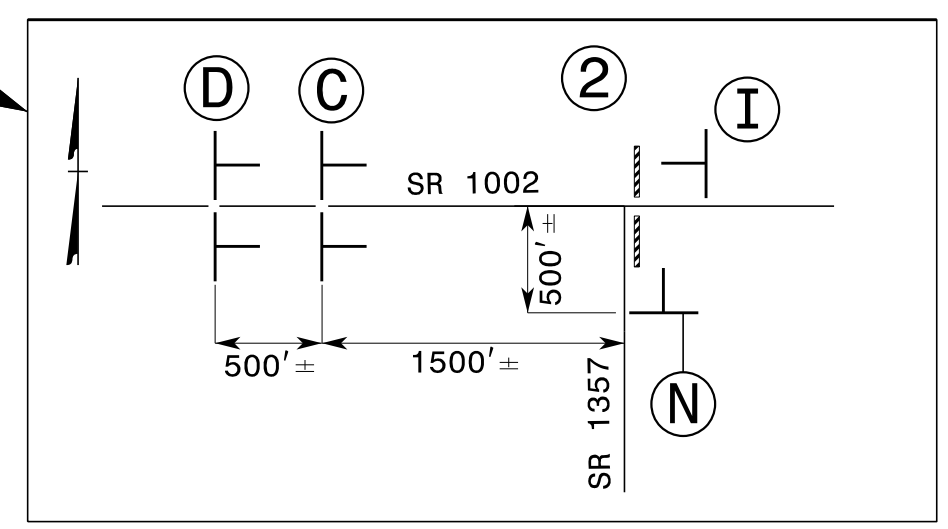
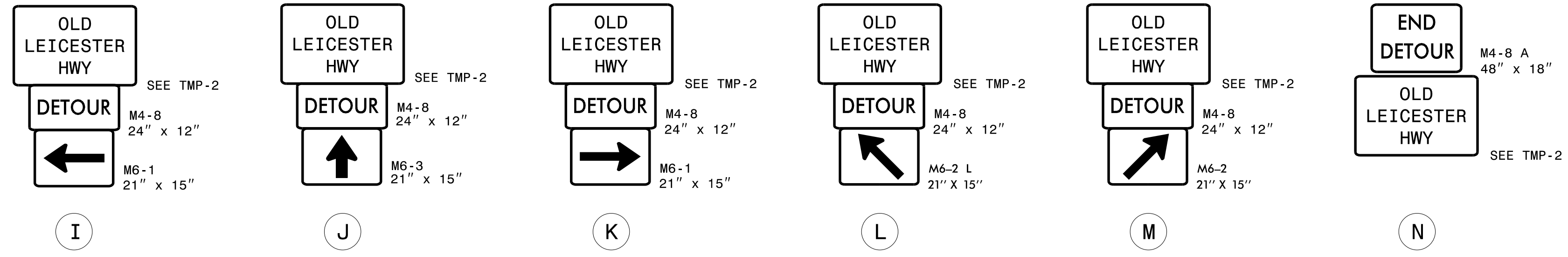
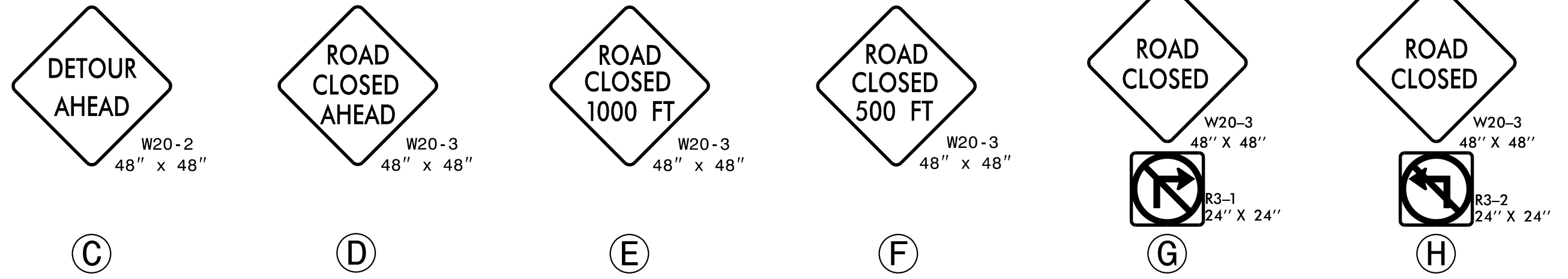
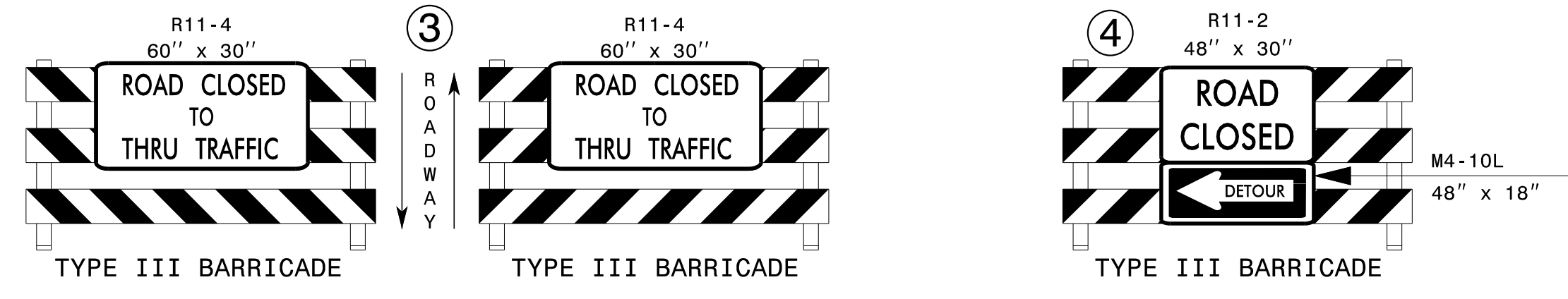
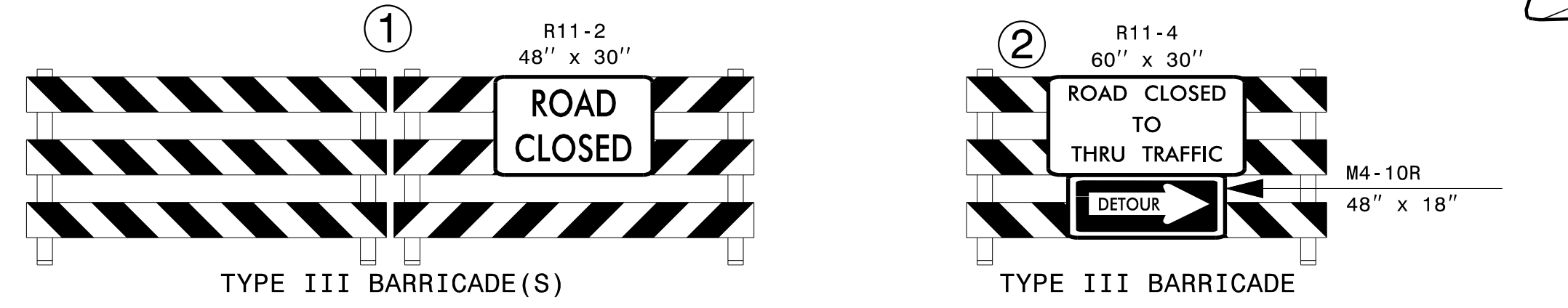
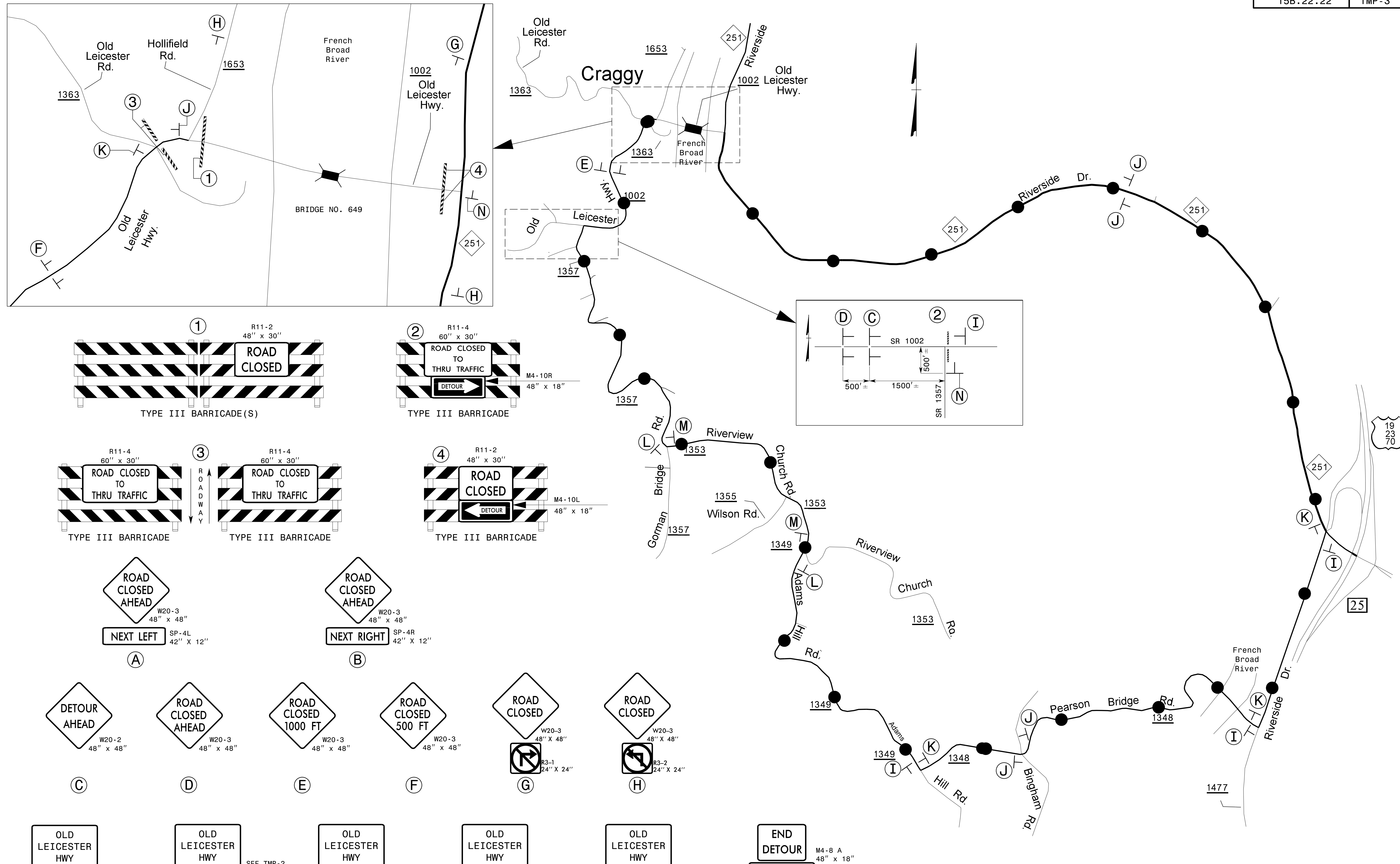
NORTH CAROLINA D.O.T. SIGN DETAIL

6/15/2015
 C:\Users\shassan\Desktop\Asheville\TMP-2.dgn
 User:shassan

APPROVED: *Ron King*
 DATE: 6/16/2015



SPECIAL SIGN DESIGN



6/15/2015 C:\Users\shassan\Desktop\Asheville\TMP-3.dgn User:shassan

APPROVED: <i>J. W. Woolard, Jr.</i> DATE: 6/16/2015 		OFF-SITE DETOUR AND BARRICADE PLACEMENT
--	--	--